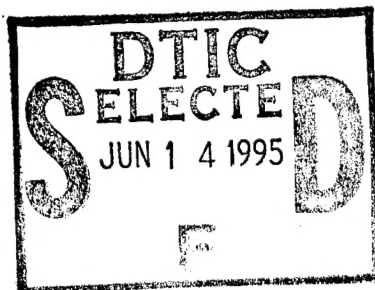




US Department  
of Transportation  
Federal Aviation  
Administration

# FAA Statistical Handbook of Aviation

Calendar Year 1993



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Below is a list of the publications compiled by the Office of Aviation, Policy, Plans, and Management Analysis; Planning Analysis Division; Statistics and Forecast Branch, Statistics Team. Questions may be directed to us by phone: (202) 267-3355, or by writing Federal Aviation Administration, Planning Analysis Division (APO-100) 800 Independence Avenue, S.W., Washington, DC 20591.

**Airport Activity Statistics of Certificated Route Air Carrier** is a joint publication of the Federal Aviation Administration (FAA) and the Research & Special Programs Administration (RSPA). RSPA furnishes airport activity data on certificated route air carriers; FAA organizes/publishes it. Included in the data are passenger enplanements, tons of enplaned freight and mail. Scheduled/nonscheduled service shown by airport and carrier are also included. Breakdown of data includes departures/enplanements/cargo/mail by airport, carrier & type of operation, and type of aircraft.

Reporting period: .....	Calendar Year
Latest edition: .....	1993 data
Order from: .....	U.S. Government Printing Office or National Technical Information Service
Date 1994 information will be available: .....	June 1995
Date next publication is scheduled: .....	September 1995 (1994 data)
Person to contact: .....	Patricia Beardsley

**Census of U.S. Civil Aircraft** is an annual publication that includes statistical data on the registered civil fleet, air carrier aircraft, and general aviation aircraft—both registered and active, detailed reports for general aviation aircraft by owner's state and county, and registered aircraft by make and model.

Reporting period: .....	Calendar Year
Latest edition: .....	1993 data
Order from: .....	U.S. Government Printing Office, or National Technical Information Service
Date 1994 information will be available: .....	March 1995
Date next publication is scheduled: .....	July 1995 (1994 data)
Person to contact: .....	Patricia Beardsley

**FAA Air Traffic Activity** furnishes terminal and en route air traffic activity information (e.g., takeoffs & landings, flight plans filed) of the National Airspace System. The data is collected/compiled from the FAA—operated Airport Traffic Control Towers, Air Route Traffic Control Centers, Flight Service Stations, Approach Control Facilities, and FAA Contract—towered airports.

Reporting period: .....	Fiscal Year
Latest edition: .....	1993 data
Order from: .....	U.S. Government Printing Office or National Technical Information Service
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Person to contact: .....	Nancy Trembley

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**FAA Statistical Handbook of Aviation** is a convenient source for historical data. It presents statistical information pertaining to the Federal Aviation Administration, the National Airspace System, Airports, Airport Activity, U.S. Civil Air Carrier Fleet, U.S. Civil Air Carrier Operating Data, Airmen, General Aviation Aircraft, Aircraft Accidents, Aeronautical Production & Import/Export.

Reporting period: .....	Calendar Year
Latest edition: .....	1993 data
Order from: .....	U.S. Government Printing Office or National Technical Information Service
Date 1994 information will be available: .....	Various
Date next publication is scheduled: .....	December 1995 (1994 data)
Person to contact: .....	Patricia Beardsley

**General Aviation Activity and Avionics Survey** publication presents the results of the general aviation activity and avionics survey conducted to obtain information on the activity and avionics of the U.S. registered general aviation aircraft fleet. The survey reveals estimated flying time of the active general aviation aircraft, and other statistics by manufacturer/model group, aircraft type, state and region of based aircraft, and primary use. Estimates are included on fuel consumption, lifetime airframe hours, avionics, and engine hours.

Reporting period: .....	Calendar Year
Latest edition: .....	1993 data
Order from: .....	U.S. Government Printing Office or National Technical Information Service
Date 1993 information will be available: .....	August 1995
Date next publication is scheduled: .....	November 1995 (1994 data)
Person to contact: .....	Patricia Beardsley

**U.S. Civil Airmen Statistics** is an annual study of detailed airmen statistics. It contains calendar year statistics on pilot and nonpilots and the number of certificates issued.

Latest edition: .....	Calendar Year 1993
Order from: .....	Statistics & Forecast Branch or National Technical Information Service
Date 1994 information will be available: .....	February 1995
Date next publication is scheduled: .....	April 1995 (1994 data)
Person to contact: .....	Patricia Beardsley

## PREFACE

The FAA Statistical Handbook of Aviation is published annually by the Federal Aviation Administration (FAA). Its prime purpose is to serve as a convenient source for historical data and to assist in evaluating progress. The Handbook should provide a valuable source of information for the Department of Transportation (DOT), operating offices of the FAA, the Research and Special Programs Administration (RSPA), and other government agencies, as well as nongovernment organizations interested in aviation.

Chapter I deals with the FAA and its functions. This section also includes a comparison of the agency's appropriations and the agency's personnel complement.

National Airspace System data reflecting the fiscal and calendar year workload of the FAA air traffic facilities—terminal and en route—are contained in Chapter II. This chapter contains air traffic activity reported by FAA-operated airport traffic control towers, air route traffic control centers, and flight service facilities

Selected statistics concerning the nation's landing facilities by state within FAA regions are presented in Chapter III. In addition to the total count of these facilities, this chapter includes statistics pertaining to the physical characteristics (paved vs. unpaved runways, lighted vs. unlighted runways, length of runways, etc.), and funds allocated for airport development.

Airline passenger, cargo, and departure statistics shown in Chapter IV were prepared from data published in *Airport Activity Statistics of Certificated Route Air Carriers*, which is issued jointly by the RSPA and the FAA. This chapter covers the activity of the large certificated U.S. air carriers only.

The U.S. civil air carrier fleet is described in detail in Chapter V. The aircraft population discussed here is not an inventory of the aircraft owned by the air carriers, but represents the aircraft reported in air carrier use.

U.S. civil air carrier operating data—revenue passenger miles flown, available seat-miles, enplanements, revenue ton-miles flown, revenue aircraft miles flown, and operating revenues and expenses of the large certificated air carriers—are presented in Chapter VI. These statistics were obtained from forms submitted by the large certificated U.S. air carriers to the RSPA. Also included in Chapter VI are traffic statistics for the small certificated and commuter air carriers.

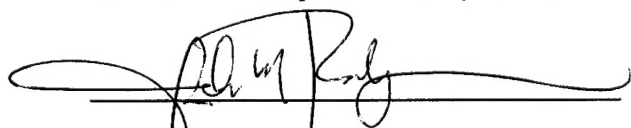
The airmen data shown in Chapter VII were obtained from official airmen certification records maintained by the FAA's Mike Monroney Aeronautical Center in Oklahoma City, Oklahoma. These data include the number of airmen as of the end of each year and the number of certificates issued during the year.

The general aviation aircraft data presented in Chapter VIII were collected from the General Aviation/Air Taxi Activity and Avionics Survey. Numbers of active aircraft and hours flown are shown for each aircraft type, use category, and state.

Aircraft accident information for air carriers, commuters, air taxis, and general aviation, appear in Chapter IX. These data were furnished by the National Transportation Safety Board (NTSB).

Aeronautical production and imports/exports are summarized in Chapter X. The production information was obtained from reports submitted to the U.S. Bureau of the Census by all known producers of complete aircraft and aircraft engines. Import/export data were obtained through Aerospace Industries Association, Inc. based on Bureau of the Census data from special monthly compilation of annual reports FT-446 and FT-410, respectively.

The FAA Statistical Handbook of Aviation is prepared by the Statistics and Forecast Branch, Planning Analysis Division, Office of Aviation Policy, Plans, and Management Analysis, with the cooperation of other FAA offices. Special appreciation is expressed to the Research and Special Programs Administration, U.S. Bureau of the Census, the National Transportation Safety Board, and many municipalities and private organizations for their assistance.



John M. Rodgers  
Director of Aviation Policy, Plans,  
and Management Analysis

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## FAA REGIONAL BOUNDARIES

INCLUDING LOCATIONS OF REGIONAL HEADQUARTERS AND CENTERS



## I. THE FEDERAL AVIATION ADMINISTRATION

The Department of Transportation Act of 1966 established a new executive department known as the Department of Transportation. The general welfare, economic growth, stability, and security of the nation pointed to the need for the development of national transportation policies and programs effectively using the nation's transportation resources. The Act provided for inclusion of the Federal Aviation Agency in the Department as the Federal Aviation Administration.

Directed by an Administrator, who is appointed by the President, by and with the advice and consent of the Senate, the FAA has as its primary function the fostering of the development and safety of American aviation. More specifically, the FAA is responsible for developing the major policies necessary to guide the long-range growth of civil aviation; modernizing the air traffic control system; establishing in a single authority the essential management functions necessary to support the common needs of civil and military operations; providing for the most effective and efficient use of the airspace over the United States; and for the rule making responsibilities relative to these functions.

The FAA constructs, operates, and maintains the National Airspace System and the facilities which are a part of the system; it allocates and regulates the use of the airspace; it ensures adequate separation between aircraft operating in controlled airspace; and, through research and development programs, it provides new systems and equipment for improving utilization of the nation's airspace.

The FAA prescribes and administers rules and regulations concerning airmen competency, aircraft airworthiness, and air traffic control. It promotes safety through certification of airmen, aircraft, and flight and aircraft maintenance schools. It reviews the design, structure, and performance of new aircraft to insure the safety of the flying public.

Services provided by FAA toward the development of aviation and air commerce include:

- Dissemination of news and information on civil aviation generally.

- Publication of flight information data for pilots.

- Technical aviation assistance to other governments, operation of overseas civil aviation missions, and the aviation training of foreign nationals.

- Development of medical standards for airmen through aviation medical research.

- Research and development in the field of aeronautics and electronics.

- Other activities required to encourage and foster the worldwide development of civil aviation and air commerce.

Policies governing these programs are developed in the Washington headquarters of FAA, and are executed by field employees.

The FAA has nine regional offices strategically located throughout the United States as well as the FAA Technical Center at Atlantic City, New Jersey, and the Mike Monroney Aeronautical Center at Oklahoma City, Oklahoma.

**TABLE 1.1**  
**FAA BUDGET AUTHORITY**  
**FISCAL YEARS 1990-1994**  
**(\$ IN MILLIONS)**

Appropriation	1990	1991	1992	1993	1994 <sup>1</sup>
<b>Total</b> .....	<b>\$7,366.6</b>	<b>\$7,937.7</b>	<b>\$8,872.1</b>	<b>\$9,167.9</b>	<b>\$8,644.6</b>
Operations (General Fund) .....	\$3,015.4	\$2,034.3	\$2,250.4	\$2,258.6	\$2,286.0
Operations (Airport and Airway Trust Fund) .....	\$808.6	\$2,003.0	\$2,109.6	\$2,279.3	\$2,294.5
Facilities and Equipment (Airport and Airway Trust Fund) .....	\$1,721.2	\$2,095.4	\$2,394.0	\$2,350.0	\$2,120.1
Grants-in-Aid for Airports (Airport and Airway Trust Fund) Contract Authority ...	\$1,651.2	\$1,600.0	\$1,900.0	\$2,050.0	\$1,690.0
(Obligation Limitation) .....	(\$1,422.0)	(\$1,834.5)	(\$1,900.0)	(\$1,800.0)	(\$1,690.0)
Research, Engineering and Development (Airport and Airway Trust Fund) .....	\$170.2	\$205.0	\$218.1	\$230.0	\$254.0

<sup>1</sup> Total includes proposed rescission of \$531.2 million.

**TABLE 1.2**  
**FAA CIVILIAN EMPLOYEES AT END OF FISCAL AND**  
**CALENDAR YEARS 1984-1993**  
(SEE NOTE BELOW)

Date	FAA Total Paid	Full Time Permanent			
		Washington Office	Washington Field	Other Field	Total
Sep-84 .....	47,216	1,943	116	43,733	45,792
Dec-84 .....	47,178	1,959	130	43,810	45,899
Sep-85 .....	47,138	2,012	132	43,651	45,795
Dec-85 .....	47,245	2,033	136	43,660	45,829
Sep-86 .....	46,682	2,022	140	43,477	45,639
Dec-86 .....	46,809	2,050	144	43,438	45,632
Sep-87 .....	47,897	2,142	152	44,204	46,498
Dec-87 .....	47,907	2,156	157	44,148	46,461
Sep-88 .....	49,002	2,267	159	45,119	47,545
Dec-88 .....	49,210	2,315	158	45,237	47,710
Sep-89 .....	50,875	2,474	159	46,753	49,386
Dec-89 .....	50,977	2,630	172	46,716	49,518
Sep-90 .....	52,010	2,809	197	47,635	50,641
Dec-90 .....	51,269	2,849	213	46,916	49,978
Sep-91 .....	53,959	3,072	274	48,971	52,317
Dec-91 .....	54,119	3,153	301	48,949	52,403
Sep-92 .....	53,972	3,260	322	48,876	52,458
Dec-92 .....	53,871	3,360	331	48,690	52,381
Sep-93 .....	53,117	3,405	371	47,911	51,687
Dec-93 .....	52,680	3,433	362	47,612	51,407

NOTE: FAA Total Paid includes full-time, part-time, and intermittent. Full time includes permanent paid full-time employees who occupy permanent positions.

Washington Office includes all paid Washington headquarters employees whose duty station is Washington, D.C.

Washington Field includes all paid Washington, D.C. employees in other states or foreign countries.

Other Field includes all paid employees whose duty stations are in the regions or centers.

**TABLE 1.3**  
**NUMBER OF TOTAL PAID FAA EMPLOYEES AS OF DECEMBER 31, 1984-1993**

Occupation	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
<b>Total .....</b>	<b>47,178</b>	<b>47,245</b>	<b>46,809</b>	<b>47,907</b>	<b>49,210</b>	<b>50,977</b>	<b>51,269</b>	<b>54,119</b>	<b>53,871</b>	<b>52,680</b>
Air Traffic Control Specialists .....	21,759	22,114	22,036	22,651	23,520	24,368	24,339	25,293	24,983	24,630
Electronics Technicians .....	7,229	6,856	6,600	6,788	6,627	6,508	6,458	6,641	6,572	6,262
Aviation Safety Inspectors .....	1,945	1,897	2,204	2,350	2,499	2,766	2,984	3,101	3,017	2,920
Engineers .....	2,419	2,450	2,417	2,579	2,640	2,657	2,736	3,073	3,208	3,198
All Others .....	13,826	13,928	13,552	13,539	13,924	14,678	14,752	16,011	16,091	15,670

## II. THE NATIONAL AIRSPACE SYSTEM

This chapter furnishes terminal and en route air traffic activity information for the National Airspace System for fiscal and calendar years. The data have been reported by the FAA-operated Airport Traffic Control Towers, Air Route Traffic Control Centers, and flight service facilities (Flight Service Stations, Automated Flight Service Stations and International Flight Service Stations). These reports are used as a guide in determining the need for larger or additional facilities, and possible changes in the number of personnel at existing facilities.

Terminal information includes airport operations, instrument operations, and instrument approaches. Airport operations are landings and takeoffs. They are reported by towers by aviation categories—air carrier, air taxi, general aviation, and military. Instrument operations are takeoffs, landings, and overflights of aircraft operating in accordance with an Instrument Flight Rules (IFR) flight plan. Instrument approaches are approaches made to an airport by an aircraft on an IFR flight plan under IFR weather conditions.

Data for Air Route Traffic Control Centers (ARTCCs) include departures, overflights, and aircraft handled.

Activities for Flight Service Stations, Automated Flight Service Stations and International Flight Service Stations include flight plans originated, airport advisories, pilot briefs, and aircraft contacted.

More detailed data pertaining to activity of these facilities may be found in *FAA Air Traffic Activity*.

**TABLE 2.1**  
**FAA AIR ROUTE FACILITIES AND SERVICES:**  
**1984-1993**

December 31	VOR/ VORTAC	Nondirectional Radio Beacons	Air Route Traffic Control Centers	Airport Traffic Control Towers	Flight Service Stations	International Flight Service Stations	Instrument Landing Systems	Radar Equipment
1984 .....	1,035	1,211	25	497	310	5	955	197
1985 .....	1,039	1,222	25	500	302	4	968	198
1986 .....	1,043	1,239	25	686	293	3	977	312
1987 .....	1,045	1,262	25	686	253	3	1,111	312
1988 .....	1,043	1,287	24	692	220	3	1,130	311
1989 .....	1,044	1,263	24	693	199	3	1,147	312
1990 .....	1,044	1,309	24	691	180	3	1,114	317
1991 .....	1,044	1,323	24	692	175	3	1,186	318
1992 .....	1,039	1,335	24	690	144	2	1,212	314
1993 .....	1,041 <sup>1</sup>	1,344 <sup>2</sup>	24 <sup>3</sup>	684 <sup>4</sup>	81 <sup>5</sup>	3	1,231 <sup>6</sup>	310 <sup>7</sup>

<sup>1</sup> Includes 72 nonfederal and 36 military.

<sup>2</sup> Includes 969 nonfederal and 67 military.

<sup>3</sup> Includes 3 CERAPS.

<sup>4</sup> Includes 69 nonfederal and 194 military.

<sup>5</sup> Includes 54 AFSS.

<sup>6</sup> Includes 219 Partial, 23 LDA, 5 ISMLS, 27 SDF, 184 nonfederal and 21 military.

<sup>7</sup> Includes FAA/MIL/nonfederal.

**FISCAL YEARS**  
**(TABLES 2.2-2.8)**

**TABLE 2.2**  
**AIR TRAFFIC ACTIVITY AT AIR ROUTE TRAFFIC CONTROL CENTERS,**  
**BY AVIATION CATEGORY**  
**FISCAL YEARS 1989-1993**

	Year	Aircraft Handled									
		Total		Air Carrier		Air Taxi		General Aviation		Military	
		Total	Annual Change	Total	Annual Change	Total	Annual Change	Total	Annual Change	Total	Annual Change
IFR Aircraft Handled <sup>1</sup>	1993	37,451,541	2%	18,981,121	3%	6,205,499	6%	7,433,281	1%	4,831,640	-6%
	1992	36,728,538	1%	18,347,269	+ <sup>3</sup>	5,864,392	5%	7,393,276	+ <sup>3</sup>	5,123,601	-1%
	1991	36,379,492	-3%	18,276,830	-1%	5,563,610	-1%	7,389,654	-7%	5,149,398	-5%
	1990	37,557,043	3%	18,545,718	6%	5,633,464	9%	7,931,305	-3%	5,446,556	-5%
	1989	36,617,064	1%	17,524,155	-2%	5,187,998	-11%	8,197,964	2%	5,706,947	25%
IFR Departures	1993	13,953,330	2%	6,314,530	2%	2,863,077	5%	3,069,589	+ <sup>3</sup>	1,706,134	-2%
	1992	13,725,661	1%	6,180,967	- <sup>3</sup>	2,727,617	4%	3,067,703	- <sup>3</sup>	1,749,374	1%
	1991	13,632,611	-3%	6,207,359	-2%	2,610,464	-1%	3,074,125	-7%	1,740,663	-5%
	1990	14,123,535	2%	6,348,263	5%	2,649,292	7%	3,299,757	-3%	1,826,223	-5%
	1989	13,856,587	+ <sup>3</sup>	6,045,411	-2%	2,467,571	-10%	3,418,090	2%	1,925,515	24%
IFR Overs <sup>2</sup>	1993	9,544,881	3%	6,352,061	6%	479,345	17%	1,294,103	3%	1,419,372	-13%
	1992	9,277,216	2%	5,985,335	2%	409,158	19%	1,257,870	1%	1,624,853	-3%
	1991	9,114,270	-2%	5,862,112	+ <sup>3</sup>	342,682	2%	1,241,404	-7%	1,668,072	-7%
	1990	9,309,973	5%	5,849,192	8%	334,880	32%	1,331,791	-2%	1,794,110	-3%
	1989	8,903,890	2%	5,433,333	-3%	252,856	-28%	1,361,784	2%	1,855,917	27%

<sup>1</sup> The number of IFR Departures multiplied by two, plus the number of IFR Overs.

<sup>2</sup> Domestic plus oceanic overs.

<sup>3</sup> Less than 0.5 percent.

**TABLE 2.3**  
**AIR TRAFFIC ACTIVITY AT AIRPORT TRAFFIC CONTROL TOWERS,**  
**BY AVIATION CATEGORY**  
**FISCAL YEARS 1989-1993**

	Year	Airport Operations									
		Total		Air Carrier		Air Taxi		General Aviation		Military	
		Total	Annual Change	Total	Annual Change	Total	Annual Change	Total	Annual Change	Total	Annual Change
Total Airport Operations	1993	60,108,153	-2%	12,581,148	1%	9,675,955	4%	35,227,770	-5%	2,623,280	-6%
	1992	61,471,727	- <sup>1</sup>	12,435,044	-1%	9,307,272	5%	36,945,360	-2%	2,784,051	11%
	1991	61,485,577	-3%	12,504,124	-3%	8,899,633	1%	37,578,303	-4%	2,503,517	-11%
	1990	63,668,880	4%	12,858,718	3%	8,837,671	7%	39,169,795	4%	2,802,696	1%
	1989	61,345,173	+ <sup>1</sup>	12,519,891	-2%	8,296,725	1%	37,753,005	1%	2,775,552	- <sup>1</sup>
Itinerant Operations	1993	44,020,957	-1%	12,581,148	1%	9,675,955	4%	20,376,766	-4%	1,387,088	-4%
	1992	44,474,828	1%	12,435,044	-1%	9,307,272	5%	21,280,913	-1%	1,451,599	11%
	1991	44,247,205	-3%	12,504,124	-3%	8,899,633	1%	21,538,486	-4%	1,304,962	-9%
	1990	45,609,732	3%	12,858,718	3%	8,837,671	7%	22,479,781	2%	1,433,562	1%
	1989	44,307,914	- <sup>1</sup>	12,519,891	-2%	8,296,725	1%	22,078,592	- <sup>1</sup>	1,412,706	- <sup>1</sup>
Local Operations	1993	16,087,196	-5%	—	—	—	—	14,851,004	-5%	1,236,192	-7%
	1992	16,996,899	-1%	—	—	—	—	15,664,447	-2%	1,332,452	11%
	1991	17,238,372	-5%	—	—	—	—	16,039,817	-4%	1,198,555	-12%
	1990	18,059,148	6%	—	—	—	—	16,690,014	6%	1,369,134	- <sup>1</sup>
	1989	17,037,259	2%	—	—	—	—	15,674,413	2%	1,362,846	-1%

<sup>1</sup> Less than 0.5 percent.



**TABLE 2.4**  
**AIR TRAFFIC ACTIVITY AT FAA FACILITIES,**  
**BY AVIATION CATEGORY**  
**FISCAL YEARS 1989-1993**

	Year	Total		Air Carrier		Air Taxi		General Aviation		Military	
		Total	Annual Change	Total	Annual Change	Total	Annual Change	Total	Annual Change	Total	Annual Change
Total Instrument Operations	1993	45,699,597	+ <sup>2</sup>	13,639,757	1%	10,446,851	6%	17,732,198	-2%	3,880,791	-1%
	1992	45,658,593	1%	13,450,145	-1%	9,895,443	5%	18,172,317	+ <sup>2</sup>	4,140,688	4%
	1991	45,056,976	-4%	13,533,872	-3%	9,452,089	1%	18,101,326	-5%	3,969,689	-10%
	1990	46,866,201	4%	13,999,470	3%	9,382,285	9%	19,084,764	2%	4,399,682	4%
	1989	45,225,344	2%	13,567,597	1%	8,625,280	2%	18,794,460	3%	4,238,007	-4%
Total Instrument Approaches	1993	2,487,271	+ <sup>2</sup>	833,848	5%	676,273	6%	870,437	-7%	106,713	- <sup>2</sup>
	1992	2,477,052	20%	795,356	9%	637,871	22%	936,776	29%	107,049	18%
	1991	2,068,390	-3%	729,217	4%	524,734	- <sup>2</sup>	723,747	-11%	90,692	+ <sup>2</sup>
	1990	2,130,532	-8%	703,116	-19%	525,242	3%	811,899	2%	90,275	-35%
	1989	2,308,880	21%	865,456	25%	509,982	14%	793,572	20%	139,870	25%
Total Instrument Approaches at Control Facilities <sup>1</sup>	1993	2,309,339	2%	821,600	5%	618,221	9%	777,397	-5%	92,121	-1%
	1992	2,265,779	20%	783,014	9%	568,162	21%	821,881	32%	92,722	19%
	1991	1,888,680	-1%	716,160	4%	471,321	3%	623,178	-9%	78,021	5%
	1990	1,904,416	-10%	687,871	-19%	457,859	1%	684,641	-2%	74,045	-40%
	1989	2,126,745	23%	853,328	26%	452,821	20%	697,751	23%	122,845	24%

<sup>1</sup> Excludes instrument approaches provided by Air Route Traffic Control Centers.

<sup>2</sup> Less than 0.5 percent.

**TABLE 2.5**  
**AIR TRAFFIC ACTIVITY AT FLIGHT SERVICE FACILITIES**  
**FISCAL YEARS 1989-1993**

	Year	Flight Services <sup>1</sup>		Flight Plans Originated		Pilot Briefs		Airport Advisories	
		Total	Annual Change	Total	Annual Change	Total	Annual Change	Total	Annual Change
Flight Service Stations & Automated Flight Service Stations	1993	37,269,192	-6%	6,188,771	-4%	9,975,172	-7%	4,941,306	-10%
	1992	39,734,200	-3%	6,436,661	-3%	10,683,101	-3%	5,494,676	-5%
	1991	41,056,343	-8%	6,607,763	-10%	11,031,195	-7%	5,778,427	-9%
	1990	44,583,131	-4%	7,317,145	-5%	11,807,920	-4%	6,333,001	-2%
	1989	46,591,219	1%	7,740,378	-2%	12,312,729	3%	6,485,005	-4%
Flight Service Stations	1993	5,495,413	-25%	767,566	-25%	1,033,101	-34%	1,894,079	-12%
	1992	7,324,711	-14%	1,023,522	-14%	1,558,845	-18%	2,159,977	-7%
	1991	8,501,245	-38%	1,195,529	-41%	1,899,323	-41%	2,311,541	-27%
	1990	13,755,655	-26%	2,042,210	-28%	3,245,861	-29%	3,179,513	-14%
	1989	18,543,627	-19%	2,841,857	-21%	4,588,693	-19%	3,682,527	-15%
Automated Flight Service Stations	1993	31,773,779	-2%	5,421,205	+ <sup>2</sup>	8,942,071	-2%	3,047,227	-9%
	1992	32,409,489	- <sup>2</sup>	5,413,139	+ <sup>2</sup>	9,124,256	- <sup>2</sup>	3,334,699	-4%
	1991	32,555,098	6%	5,412,234	3%	9,131,872	7%	3,466,886	10%
	1990	30,827,476	10%	5,274,935	8%	8,562,059	11%	3,153,488	13%
	1989	28,047,592	19%	4,898,521	15%	7,724,036	23%	2,802,478	15%

<sup>1</sup> The sum of flight plans originated and pilot briefs, multiplied by two, plus the number of aircraft contacted.

<sup>2</sup> Less than 0.5 percent.

**TABLE 2.6**  
**TOP 50 FAA-OPERATED AIRPORT TRAFFIC CONTROL TOWERS,**  
**BY RANK ORDER OF TOTAL OPERATIONS**  
**AND BY AVIATION CATEGORY INCLUDING AIR CARRIER RANK**  
**FISCAL YEAR 1993**

Tower	Total		Air Carrier		Air Taxi	General Aviation	Military
	Rank	Operations	Rank	Operations			
Chicago O'Hare Int'l, IL .....	1	851,865	1	684,647	131,714	32,364	3,140
Dallas Ft. Worth Reg'l, TX .....	2	789,183	2	591,687	182,545	13,918	1,033
Los Angeles Int'l, CA .....	3	681,845	4	411,601	204,947	51,478	13,819
Atlanta Int'l, GA .....	4	658,414	3	473,628	157,010	23,675	4,101
Denver Stapleton Int'l, CO .....	5	552,238	5	350,028	168,626	32,091	1,493
Miami Int'l, FL .....	6	527,545	6	309,503	136,281	75,555	6,206
Phoenix Sky Harbor Int'l, AZ .....	7	520,403	8	293,022	94,250	115,963	17,168
Van Nuys, CA .....	8	505,043	NA	0	657	503,945	441
Boston Logan, MA .....	9	495,347	16	241,914	225,548	27,265	620
Santa Ana/Orange County, CA .....	10	494,378	56	64,905	34,576	393,897	1,000
Detroit Metro Wayne, MI .....	11	460,009	7	297,422	97,419	63,011	2,157
Charlotte Douglas, NC .....	12	446,315	15	243,058	133,254	65,057	4,946
Minneapolis/St. Paul Int'l, MN .....	13	442,341	13	260,543	113,696	65,195	2,907
St. Louis Int'l, MO .....	14	441,142	11	278,221	112,258	42,100	8,563
Las Vegas McCarran, NV .....	15	439,393	20	205,075	103,979	115,115	15,224
Oakland Int'l, CA .....	16	439,214	31	121,953	55,164	261,232	865
Newark, NJ .....	17	431,944	9	288,265	122,044	21,118	517
Long Beach, CA .....	18	425,956	117	12,742	3,011	408,044	2,159
San Francisco, CA .....	19	423,404	10	287,404	101,982	31,696	2,322
Pittsburgh Greater Int'l, PA .....	20	419,581	12	262,270	127,795	21,778	7,738
Denver Centennial, CO .....	21	405,302	263	35	7,182	388,906	9,179
Philadelphia Int'l, PA .....	22	390,736	18	219,792	119,349	45,835	5,760
Honolulu, HI .....	23	365,195	23	187,950	55,216	98,150	23,879
Seattle Boeing, WA .....	24	358,835	168	4,701	30,873	320,322	2,939
Pontiac, MI .....	25	356,023	229	219	14,974	340,458	372
Houston Intercontinental, TX .....	26	352,340	17	239,695	61,199	49,690	1,756
John F Kennedy Int'l, NY .....	27	351,205	19	209,473	126,880	14,493	359
Seattle Tacoma Int'l, WA .....	28	339,968	22	197,955	133,666	8,046	301
Memphis Int'l, TN .....	29	337,608	25	172,714	98,710	59,993	6,191
La Guardia, NY .....	30	335,071	14	251,225	67,087	16,441	318
Orlando Int'l, FL .....	31	327,199	21	203,465	95,114	23,042	5,578
Salt Lake City Int'l, UT .....	32	324,595	26	170,616	69,358	80,040	4,581
Nashville Metropolitan, TN .....	33	318,886	29	125,507	125,336	61,984	6,059
Washington National, DC .....	34	316,762	24	182,418	78,094	55,248	1,002
San Jose Int'l, CA .....	35	312,405	43	88,984	46,116	176,278	1,027
Cincinnati Greater, KY .....	36	306,811	27	151,525	141,075	13,026	1,185
Tulsa Riverside, OK .....	37	305,599	298	2	13	305,573	11
Raleigh Durham, NC .....	38	294,066	36	115,378	103,337	67,168	8,183
Fort Worth Meacham, TX .....	39	290,698	214	403	780	288,682	833
Livermore, CA .....	40	282,782	NA	0	626	281,324	832
Portland, OR .....	41	280,263	39	93,202	114,832	59,910	12,319
Washington Dulles Int'l, VA .....	42	277,483	44	88,257	127,247	54,105	7,874
Baltimore Washington Int'l, MD .....	43	261,674	32	120,201	90,082	47,839	3,552
Daytona Beach, FL .....	44	258,572	123	10,780	8,618	238,338	836
Prescott, AZ .....	45	251,560	NA	0	9,383	241,866	311
Grand Forks Int'l, ND .....	46	247,774	172	3,814	8,877	234,441	642
Cleveland Hopkins Int'l, OH .....	47	247,502	33	119,249	93,411	31,318	3,524
Colorado Springs, CO .....	48	246,732	85	23,058	6,426	173,128	44,120
Concord, CA .....	49	241,777	NA	0	480	240,759	538
Tampa Int'l, FL .....	50	240,425	34	118,491	71,420	48,591	1,923

(NA) Not applicable.

NOTE: Total Operations rank was based on total air traffic activity at 402 FAA-Operated Towers. Air Carrier operations rank was based on air carrier activity at 313 FAA-Operated Towers. Not all FAA-Operated Towers handle air carrier operations.

**TABLE 2.7**  
**TOP 50 FAA-OPERATED AIRPORT TRAFFIC CONTROL TOWERS,**  
**BY RANK ORDER OF AIR CARRIER OPERATIONS**  
**AND BY AVIATION CATEGORY INCLUDING TOTAL OPERATIONS RANK**  
**FISCAL YEAR 1993**

Tower	Air Carrier		Air Taxi	General Aviation	Military	Total	
	Rank	Operations				Rank	Operations
Chicago O'Hare Int'l, IL .....	1	684,647	131,714	32,364	3,140	1	851,865
Dallas Ft. Worth Reg'l, TX .....	2	591,687	182,545	13,918	1,033	2	789,183
Atlanta Int'l, GA .....	3	473,628	157,010	23,675	4,101	4	658,414
Los Angeles Int'l, CA .....	4	411,601	204,947	51,478	13,819	3	681,845
Denver Stapleton Int'l, CO .....	5	350,028	168,626	32,091	1,493	5	552,238
Miami Int'l, FL .....	6	309,503	136,281	75,555	6,206	6	527,545
Detroit Metro Wayne, MI .....	7	297,422	97,419	63,011	2,157	11	460,009
Phoenix Sky Harbor Int'l, AZ .....	8	293,022	94,250	115,963	17,168	7	520,403
Newark, NJ .....	9	288,265	122,044	21,118	517	17	431,944
San Francisco, CA .....	10	287,404	101,982	31,696	2,322	19	423,404
St. Louis Int'l, MO .....	11	278,221	112,258	42,100	8,563	14	441,142
Pittsburgh Greater Int'l, PA .....	12	262,270	127,795	21,778	7,738	20	419,581
Minneapolis/St. Paul Int'l, MN .....	13	260,543	113,696	65,195	2,907	13	442,341
La Guardia, NY .....	14	251,225	67,087	16,441	318	30	335,071
Charlotte Douglas, NC .....	15	243,058	133,254	65,057	4,946	12	446,315
Boston Logan, MA .....	16	241,914	225,548	27,265	620	9	495,347
Houston Intercontinental, TX .....	17	239,695	61,199	49,690	1,756	26	352,340
Philadelphia Int'l, PA .....	18	219,792	119,349	45,835	5,760	22	390,736
John F Kennedy, NY .....	19	209,473	126,880	14,493	359	27	351,205
Las Vegas McCarran, NV .....	20	205,075	103,979	115,115	15,224	15	439,393
Orlando Int'l, FL .....	21	203,465	95,114	23,042	5,578	31	327,199
Seattle-Tacoma, WA .....	22	197,955	133,666	8,046	301	28	339,968
Honolulu, HI .....	23	187,950	55,216	98,150	23,879	23	365,195
Washington National, DC .....	24	182,418	78,094	55,248	1,002	34	316,762
Memphis Int'l, TN .....	25	172,714	98,710	59,993	6,191	29	337,608
Salt Lake City Int'l, UT .....	26	170,616	69,358	80,040	4,581	32	324,595
Cincinnati Greater, KY .....	27	151,525	141,075	13,026	1,185	36	306,811
San Diego Lindberg, CA .....	28	135,750	48,957	19,297	5,263	77	209,267
Nashville Metropolitan, TN .....	29	125,507	125,336	61,984	6,059	33	318,886
Houston Hobby, TX .....	30	122,635	7,294	108,874	831	51	239,634
Oakland Int'l, CA .....	31	121,953	55,164	261,232	865	16	439,214
Baltimore Washington Int'l, MD .....	32	120,201	90,082	47,839	3,552	43	261,674
Cleveland Hopkins, OH. ....	33	119,249	93,411	31,318	3,524	47	247,502
Tampa Int'l, FL .....	34	118,491	71,420	48,591	1,923	50	240,425
Kansas City Int'l, MO .....	35	116,904	49,622	16,382	1,940	102	184,848
Raleigh Durham, NC .....	36	115,378	103,337	67,168	8,183	38	294,066
Indianapolis, IN .....	37	112,200	74,470	49,972	2,147	52	238,789
Anchorage Int'l, AK .....	38	94,946	69,567	50,075	3,691	66	218,279
Portland, OR .....	39	93,202	114,832	59,910	12,319	41	280,263
Dallas Love Field, TX .....	40	91,658	25,037	94,585	1,574	71	212,854
New Orleans Moisant, LA .....	41	91,502	24,369	24,003	1,510	163	141,384
Ontario, CA .....	42	89,802	35,239	27,483	390	146	152,914
San Jose Int'l, CA .....	43	88,984	46,116	176,278	1,027	35	312,405
Washington Dulles Int'l, VA .....	44	88,257	127,247	54,105	7,874	42	277,483
Fort Lauderdale, FL .....	45	85,300	55,921	75,322	1,243	67	217,786
Louisville Standiford, KY .....	46	83,369	29,916	37,469	5,187	137	155,941
Port Columbus, OH .....	47	81,207	51,570	81,808	2,464	68	217,049
San Antonio Int'l, TX .....	48	78,644	29,945	105,014	5,702	65	219,305
Milwaukee Mitchell, WI .....	49	74,969	54,154	63,430	5,976	85	198,529
Chicago Midway, IL .....	50	74,798	44,126	68,556	2,275	93	189,755

NOTE: Total Operations rank was based on total air traffic activity at 402 FAA-Operated Towers. Air Carrier operations rank was based on air carrier activity at 313 FAA-Operated Towers. Not all FAA-Operated Towers handle air carrier operations.

**TABLE 2.8**  
**TOTAL FAA AIR TRAFFIC ACTIVITY BY REGION AND STATE,**  
**AND BY FAA-OPERATED TOWERS, AIR ROUTE TRAFFIC CONTROL CENTERS,**  
**FLIGHT SERVICE STATIONS, AND INTERNATIONAL FLIGHT SERVICE STATIONS**  
**FISCAL YEAR 1993**

FAA Region and State	Airport Operations (Towers)	Aircraft Handled (Centers)	Total Flight Services (Flight Service Station)*
<b>TOTAL</b>	<b>60,108,153</b>	<b>37,451,541</b>	<b>37,269,192</b>
<b>Alaskan—Total</b>	<b>1,070,831</b>	<b>519,670</b>	<b>1,906,647</b>
<b>Central—Total</b>	<b>2,202,808</b>	<b>1,789,477</b>	<b>2,593,262</b>
Iowa	388,380	—	492,698
Kansas	440,828	—	507,348
Missouri	1,107,578	1,789,477	1,229,077
Nebraska	266,022	—	364,139
<b>Eastern—Total</b>	<b>8,071,821</b>	<b>4,237,999</b>	<b>4,534,458</b>
Delaware	175,280	—	—
District of Columbia	316,762	2,215,306	830,220
Maryland	451,524	—	90,972
New Jersey	1,353,627	—	612,799
New York	2,455,725	2,022,693	884,148
Pennsylvania	1,855,181	—	1,596,411
Virginia	1,114,069	—	116,424
West Virginia	349,653	—	403,484
<b>Great Lakes—Total</b>	<b>9,185,483</b>	<b>8,866,520</b>	<b>6,018,297</b>
Illinois	2,528,969	2,636,802	881,358
Indiana	789,247	1,917,190	779,709
Michigan	2,076,908	—	1,014,371
Minnesota	1,101,442	1,862,372	759,157
North Dakota	427,081	—	393,892
Ohio	1,273,426	2,450,156	1,134,497
South Dakota	155,958	—	376,103
Wisconsin	832,452	—	679,210
<b>New England—Total</b>	<b>2,821,332</b>	<b>1,611,218</b>	<b>1,698,169</b>
Connecticut	692,985	—	928,047
Maine	234,010	—	380,713
Massachusetts	1,475,078	1,611,218	—
New Hampshire	175,532	—	—
Rhode Island	125,442	—	—
Vermont	118,285	—	389,409
<b>Northwest Mountain—Total</b>	<b>5,390,502</b>	<b>4,179,735</b>	<b>3,454,377</b>
Colorado	1,567,929	1,450,980	780,568
Idaho	375,310	—	219,315
Montana	297,371	—	381,977
Oregon	912,771	—	509,227
Utah	418,883	1,354,519	319,613
Washington	1,716,503	1,374,236	973,819
Wyoming	101,735	—	269,858
<b>Southern—Total</b>	<b>11,222,560</b>	<b>7,723,565</b>	<b>8,380,047</b>
Alabama	588,867	—	737,062
Florida	5,241,541	3,538,264	2,811,886
Georgia	1,326,294	2,266,080	1,002,698
Kentucky	707,510	—	485,329
Mississippi	305,082	—	375,499
North Carolina	1,205,938	—	1,039,956
Puerto Rico	290,575	—	221,600
South Carolina	415,688	—	694,631
Tennessee	966,775	1,919,221	1,011,386
Virgin Islands	174,290	—	—
<b>Southwest—Total</b>	<b>6,715,316</b>	<b>5,116,265</b>	<b>4,425,790</b>
Arkansas	340,007	—	440,113
Louisiana	965,685	—	465,067
New Mexico	403,773	1,361,883	536,322
Oklahoma	782,476	—	594,234
Texas	4,223,375	3,754,382	2,390,054
<b>Western-Pacific—Total</b>	<b>13,427,500</b>	<b>3,407,092</b>	<b>4,258,145</b>
American Samoa	10,592	—	—
Arizona	1,925,572	—	612,079
California	9,931,154	3,306,193	3,073,164
Guam	—	100,899	—
Hawaii	786,219	—	191,209
Nevada	755,957	—	381,693
Wake Island	18,006	—	—

\* Includes domestic and international Flight Service Stations.

**CALENDAR YEARS**  
**(TABLES 2.9–2.15)**

**TABLE 2.9**  
**AIR TRAFFIC ACTIVITY AT AIR ROUTE TRAFFIC CONTROL CENTERS,**  
**BY AVIATION CATEGORY**  
**CALENDAR YEARS 1989-1993**

	Year	Aircraft Handled									
		Total		Air Carrier		Air Taxi		General Aviation		Military	
		Total	Annual Change	Total	Annual Change	Total	Annual Change	Total	Annual Change	Total	Annual Change
IFR Aircraft Handled <sup>1</sup>	1993	37,790,320	2%	19,161,105	3%	62,263,642	6%	7,502,903	1%	4,862,570	-4%
	1992	36,951,044	2%	18,529,347	2%	5,934,623	6%	7,409,110	- <sup>3</sup>	5,077,964	- <sup>3</sup>
	1991	36,210,791	-4%	18,091,513	-3%	5,604,346	-1%	7,414,483	-5%	5,100,449	-5%
	1990	37,541,831	2%	18,739,431	6%	5,647,553	7%	7,766,547	-4%	5,388,300	-5%
	1989	36,704,773	1%	17,600,768	-2%	5,284,042	-7%	8,126,818	1%	5,693,145	19%
IFR Departures	1993	14,084,216	2%	6,381,506	3%	2,880,241	4%	3,092,975	1%	1,729,494	-1%
	1992	13,802,389	2%	6,219,223	1%	2,757,905	5%	3,092,975	- <sup>3</sup>	1,752,820	2%
	1991	13,559,081	-4%	6,133,980	-4%	2,621,486	-1%	3,085,376	-5%	1,718,239	-6%
	1990	14,108,481	2%	6,396,281	5%	2,658,659	6%	3,232,788	-5%	1,820,753	-4%
	1989	13,854,290	<sup>3</sup>	6,065,044	-1%	2,499,739	-6%	3,386,246	1%	1,903,261	17%
IFR Overs <sup>2</sup>	1993	9,621,888	3%	6,398,093	5%	503,260	20%	1,316,953	4%	1,403,582	-11%
	1992	9,346,266	3%	6,090,901	5%	418,813	16%	1,264,228	2%	1,572,324	-6%
	1991	9,092,629	-2%	5,823,553	-2%	361,374	9%	1,243,731	-4%	1,663,971	-5%
	1990	9,324,869	4%	5,946,869	9%	330,235	16%	1,300,971	-4%	1,746,794	-7%
	1989	8,996,193	2%	5,470,680	-3%	284,564	-11%	1m354,326	<sup>3</sup>	1,886,623	24%

<sup>1</sup> The number of IFR Departures multiplied by two, plus the number of IFR Overs.

<sup>2</sup> Domestic plus oceanic overs.

<sup>3</sup> Less than 0.5 percent.

**TABLE 2.10**  
**AIR TRAFFIC ACTIVITY AT AIRPORT TRAFFIC CONTROL TOWERS,**  
**BY AVIATION CATEGORY**  
**CALENDAR YEARS 1989-1993**

	Year	Airport Operations									
		Total		Air Carrier		Air Taxi		General Aviation		Military	
		Total	Annual Change	Total	Annual Change	Total	Annual Change	Total	Annual Change	Total	Annual Change
Total Airport Operations	1993	60,270,485	-2%	12,703,854	2%	9,793,064	4%	35,196,646	-4%	2,576,921	-7%
	1992	61,342,974	1%	12,475,379	1%	9,401,703	6%	36,681,189	-1%	2,784,703	11%
	1991	60,844,288	-5%	12,336,595	-5%	8,911,100	-1%	37,084,478	-6%	2,512,115	-9%
	1990	63,962,781	4%	12,948,295	4%	8,968,697	7%	39,297,710	4%	2,748,079	-1%
	1989	61,321,964	- <sup>1</sup>	12,484,530	-2%	8,356,587	+ <sup>1</sup>	37,713,390	+ <sup>1</sup>	2,767,457	-2%
Itinerant Operations	1993	44,257,862	- <sup>1</sup>	12,703,854	2%	9,793,064	4%	20,396,040	-3%	1,364,904	-6%
	1992	44,455,692	1%	12,475,379	1%	9,401,703	6%	21,128,552	-1%	1,450,058	10%
	1991	43,833,165	-4%	12,336,595	-5%	8,911,100	-1%	21,267,456	-6%	1,318,014	-7%
	1990	45,842,637	4%	12,948,295	4%	8,968,697	7%	22,508,515	2%	1,417,130	+ <sup>1</sup>
	1989	44,261,015	-1%	12,484,530	-2%	8,356,587	- <sup>1</sup>	22,006,509	-1%	1,413,389	- <sup>1</sup>
Local Operations	1993	16,012,623	-5%	—	—	—	—	14,800,606	-5%	1,212,017	-9%
	1992	16,887,282	-1%	—	—	—	—	15,552,637	-2%	1,334,645	12%
	1991	17,011,123	-6%	—	—	—	—	15,817,022	-6%	1,194,101	-10%
	1990	18,120,144	6%	—	—	—	—	16,789,195	7%	1,330,949	-2%
	1989	17,060,949	1%	—	—	—	—	15,706,881	1%	1,354,068	-3%

<sup>1</sup> Less than 0.5 percent.

**TABLE 2.11**  
**AIR TRAFFIC ACTIVITY AT FAA FACILITIES,**  
**BY AVIATION CATEGORY**  
**CALENDAR YEARS 1989-1993**

	Year	Total		Air Carrier		Air Taxi		General Aviation		Military	
		Total	Annual Change	Total	Annual Change	Total	Annual Change	Total	Annual Change	Total	Annual Change
Total Instrument Operations	1993	46,004,610	1%	13,777,633	2%	10,563,002	5%	17,837,304	-1%	3,826,671	-7%
	1992	45,707,585	2%	13,508,463	1%	10,033,792	6%	18,051,699	+ <sup>2</sup>	4,113,631	3%
	1991	44,822,166	-4%	13,332,196	-5%	9,484,368	+ <sup>2</sup>	18,025,688	-5%	3,979,914	-7%
	1990	46,935,150	4%	14,103,619	4%	9,538,773	11%	18,995,944	2%	4,296,814	-1%
	1989	45,055,648	+ <sup>2</sup>	13,501,139	+ <sup>2</sup>	8,598,447	1%	18,631,727	1%	4,324,335	-3%
Total Instrument Approaches	1993	2,304,055	-12%	777,842	-10%	631,502	-8%	797,932	-17%	96,779	-14%
	1992	2,625,178	18%	864,772	15%	682,986	22%	964,275	19%	113,145	17%
	1991	2,216,704	7%	753,124	7%	558,540	8%	807,926	6%	97,114	11%
	1990	2,074,931	-12%	703,607	-19%	520,655	-2%	762,782	-7%	87,887	-34%
	1989	2,354,303	29%	871,457	36%	530,050	25%	819,829	26%	132,967	18%
Total Instrument Approaches at Control Facilities <sup>1</sup>	1993	N/A	—	N/A	—	N/A	—	N/A	—	N/A	—
	1992	2,422,484	20%	851,880	15%	615,663	23%	856,394	23%	98,547	17%
	1991	2,021,138	9%	740,355	8%	499,869	9%	696,581	8%	84,333	16%
	1990	1,863,106	-14%	688,772	-20%	458,004	-3%	643,345	-11%	72,985	-37%
	1989	2,171,464	32%	858,637	36%	474,600	32%	722,910	30%	115,317	17%

<sup>1</sup> Excludes instrument approaches provided by Air Route Traffic Control Centers.

<sup>2</sup> Less than 0.5 percent.

**TABLE 2.12**  
**AIR TRAFFIC ACTIVITY AT FLIGHT SERVICE FACILITIES**  
**CALENDAR YEARS 1989-1993**

	Year	Flight Services <sup>1</sup>		Flight Plans Originated		Pilot Briefs		Aircraft Contacted	
		Total	Annual Change	Total	Annual Change	Total	Annual Change	Total	Annual Change
Flight Service Stations & Automated Flight Service Stations	1993	36,799,959	-7%	6,171,636	-4%	9,798,868	-8%	4,858,951	-10%
	1992	39,430,634	-3%	6,400,202	-2%	10,604,514	-3%	5,421,202	-4%
	1991	40,691,408	-7%	6,542,483	-8%	10,965,209	-5%	5,676,024	-9%
	1990	43,696,478	-5%	7,125,915	-7%	11,602,109	-5%	6,240,430	-3%
	1989	46,211,404	1%	7,660,484	-2%	12,227,038	3%	6,436,360	-4%
Flight Service Stations	1993	4,957,652	-30%	686,248	-30%	896,499	-40%	1,792,158	-15%
	1992	7,073,294	-12%	980,500	-13%	1,497,238	-16%	2,117,818	-6%
	1991	8,076,751	-38%	1,128,013	-41%	1,787,447	-41%	2,245,831	-27%
	1990	12,974,279	-26%	1,902,848	-29%	3,051,713	-30%	3,065,157	-14%
	1989	17,612,149	-19%	2,681,048	-21%	4,337,302	-19%	3,575,449	-15%
Automated Flight Service Stations	1993	31,842,307	-2%	5,485,388	1%	8,902,369	-2%	3,066,793	-7%
	1992	32,357,340	- <sup>2</sup>	5,419,702	+ <sup>2</sup>	9,107,276	- <sup>2</sup>	3,303,384	-4%
	1991	32,614,657	6%	5,414,470	4%	9,177,762	7%	3,430,193	8%
	1990	30,722,199	7%	5,223,067	5%	8,550,396	8%	3,175,273	11%
	1989	28,599,255	19%	4,979,436	15%	7,889,736	23%	2,860,911	15%

<sup>1</sup> The sum of flight plans originated and pilot briefs, multiplied by two, plus the number of aircraft contacted.

<sup>2</sup> Less than 0.5 percent.

**TABLE 2.13**  
**TOP 50 FAA-OPERATED AIRPORT TRAFFIC CONTROL TOWERS,**  
**BY RANK ORDER OF TOTAL OPERATIONS**  
**AND BY AVIATION CATEGORY INCLUDING AIR CARRIER RANK**  
**CALENDAR YEAR 1993**

Tower	Total		Air Carrier		Air Taxi	General Aviation	Military
	Rank	Operations	Rank	Operations			
Chicago O'Hare Int'l, IL .....	1	859,208	1	714,625	107,311	33,938	3,334
Dallas Ft. Worth Regional, TX .....	2	803,902	2	599,824	189,200	13,822	1,056
Los Angeles Int'l, CA .....	3	682,446	4	408,043	212,592	47,027	14,784
Atlanta Int'l, GA .....	4	671,183	3	485,595	158,473	23,390	3,725
Denver Stapleton Int'l, CO .....	5	558,695	5	354,270	173,702	29,220	1,503
Miami Int'l, FL .....	6	533,555	6	315,016	142,004	71,199	5,336
Phoenix Sky Harbor Int'l, AZ .....	7	529,912	8	295,542	97,741	119,217	17,412
Van Nuys, CA .....	8	509,049	N/A	0	799	507,781	469
Boston Logan, MA .....	9	503,739	16	244,100	230,442	28,648	549
Santa Ana/Orange County, CA .....	10	478,725	55	66,192	37,096	374,515	922
Detroit Metro Wayne, MI .....	11	462,482	7	300,496	96,179	63,677	2,130
Las Vegas McCarran Int'l, NV .....	12	457,235	19	211,472	105,474	123,322	16,967
Oakland Int'l, CA .....	13	456,955	29	126,666	56,635	272,762	892
St. Louis Int'l, MO .....	14	453,268	11	283,579	115,171	45,508	9,010
Charlotte Douglas, NC .....	15	450,547	15	245,810	133,931	66,050	4,756
Minneapolis St. Paul Int'l, MN .....	16	444,202	13	258,584	116,635	66,144	2,839
Newark, NJ .....	17	440,633	9	290,878	128,294	20,994	467
Long Beach, CA .....	18	430,904	116	12,260	2,366	414,284	1,994
San Francisco Int'l, CA .....	19	425,869	10	287,662	103,654	32,185	2,368
Pittsburgh Greater Int'l, PA .....	20	420,995	12	261,686	129,335	22,077	7,897
Denver Centennial, CO .....	21	415,453	266	35	7,417	399,898	8,103
Philadelphia Int'l, PA .....	22	397,202	18	221,352	124,172	46,002	5,676
Seattle Boeing, WA .....	23	363,323	168	4,708	32,202	323,401	3,012
Honolulu, HI .....	24	358,543	23	185,959	53,742	96,522	22,320
Pontiac, MI .....	25	356,361	228	229	16,538	339,185	409
Houston Intercontinental, TX .....	26	354,263	17	240,706	61,499	50,290	1,768
John F. Kennedy Int'l, NY .....	27	349,409	20	208,027	126,679	14,363	340
Seattle Tacoma Int'l, WA .....	28	339,461	21	200,040	131,046	8,097	278
Memphis Int'l, TN .....	29	338,041	26	172,458	99,289	59,965	6,329
La Guardia, NY .....	30	337,674	14	252,974	67,788	16,643	269
Salt Lake City Int'l, UT .....	31	330,067	25	173,942	69,481	82,076	4,568
Orlando Int'l, FL .....	32	329,337	22	195,119	105,274	23,469	5,475
Tulsa Riverside, OK .....	33	321,656	307	2	20	321,333	301
Washington National, DC .....	34	320,336	24	183,777	78,205	56,918	1,436
Nashville Metropolitan, TN .....	35	315,049	33	120,661	126,262	62,251	5,875
Cincinnati Greater, KY .....	36	312,104	27	152,467	145,286	13,220	1,131
San Jose Int'l, CA .....	37	305,960	43	91,247	37,244	176,581	888
Raleigh Durham, NC .....	38	291,259	35	115,588	100,583	67,393	7,695
Livermore Municipal, CA .....	39	282,621	N/A	0	582	281,321	718
Portland Int'l, OR .....	40	280,829	39	95,069	114,704	58,660	12,396
Washington Dulles Int'l, VA .....	41	280,177	46	85,550	132,938	54,015	7,674
Daytona Beach, FL .....	42	278,654	123	10,642	8,526	258,380	1,106
Fort Worth Meacham, TX .....	43	265,811	218	345	663	263,912	891
Baltimore Washington Int'l, MD .....	44	264,002	30	126,657	86,686	47,144	3,515
Tampa Int'l, FL .....	45	248,343	31	124,419	73,755	48,363	1,806
Grand Forks Int'l, ND .....	46	248,164	174	3,823	9,388	233,717	1,236
Colorado Springs, CO .....	47	248,002	83	23,853	7,440	174,540	42,169
Cleveland Hopkins Int'l, OH .....	48	247,754	36	115,203	97,550	31,365	3,636
Fort Lauderdale Executive, FL .....	49	244,330	N/A	0	6,274	237,897	159
Prescott, AZ .....	50	241,496	N/A	0	8,711	232,518	267

NOTE: Total Operations rank was based on total air traffic activity at 400 FAA-Operated Towers. Air Carrier operations rank was based on air carrier activity at 298 FAA-Operated Towers. Not all FAA-Operated Towers handle air carrier operations.



**TABLE 2.14**  
**TOP 50 FAA-OPERATED AIRPORT TRAFFIC CONTROL TOWERS,**  
**BY RANK ORDER OF AIR CARRIER OPERATIONS**  
**AND BY AVIATION CATEGORY INCLUDING TOTAL OPERATIONS RANK**  
**CALENDAR YEAR 1993**

Tower	Air Carrier		Air Taxi	General Aviation	Military	Total	
	Rank	Operations				Rank	Operations
Chicago O'Hare Int'l, IL .....	1	714,625	107,311	33,938	3,334	1	859,208
Dallas Ft. Worth Int'l, TX .....	2	599,824	189,200	13,822	1,056	2	803,902
Atlanta International, GA .....	3	485,595	158,473	23,390	3,725	4	671,183
Los Angeles Int'l, CA .....	4	408,043	212,592	47,027	14,784	3	682,446
Denver Stapleton Int'l, CO .....	5	354,270	173,702	29,220	1,503	5	558,695
Miami International, FL .....	6	315,016	142,004	71,199	5,336	6	533,555
Detroit Metro Wayne, MI .....	7	300,496	96,179	63,677	2,130	11	462,482
Phoenix Sky Harbor Int'l, AZ .....	8	295,542	97,741	119,217	17,412	7	529,912
Newark, NJ .....	9	290,878	128,294	20,994	467	17	440,633
San Francisco Int'l, CA .....	10	287,662	103,654	32,185	2,368	19	425,869
St. Louis Int'l, MO .....	11	283,579	115,171	45,508	9,010	14	453,268
Pittsburgh Greater Int'l, PA .....	12	261,686	129,335	22,077	7,897	20	420,995
Minneapolis St. Paul Int'l, MN .....	13	258,584	116,635	66,144	2,839	16	444,202
La Guardia, NY .....	14	252,974	67,788	16,643	269	30	337,674
Charlotte Douglas, NC .....	15	245,810	133,931	66,050	4,756	15	450,547
Boston Logan, MA .....	16	244,100	230,442	28,648	549	9	503,739
Houston Intercontinental, TX .....	17	240,706	61,499	50,290	1,768	26	354,263
Philadelphia Int'l, PA .....	18	221,352	124,172	46,002	5,676	22	397,202
Las Vegas McCarran Int'l, NV .....	19	211,472	105,474	123,322	16,967	12	457,235
John F. Kennedy Int'l, NY .....	20	208,027	126,679	14,363	340	27	349,409
Seattle Tacoma Int'l, WA .....	21	200,040	131,046	8,097	278	28	339,461
Orlando Int'l, FL .....	22	195,119	105,274	23,469	5,475	32	329,337
Honolulu, HI .....	23	185,959	53,742	96,522	22,320	24	358,543
Washington National, DC .....	24	183,777	78,205	56,918	1,436	34	320,336
Salt Lake City Int'l, UT .....	25	173,942	69,481	82,076	4,568	31	330,067
Memphis Int'l, TN .....	26	172,458	99,289	59,965	6,329	29	338,041
Cincinnati Greater, KY .....	27	152,467	145,286	13,220	1,131	36	312,104
San Diego Lindberg, CA .....	28	137,779	45,628	19,860	5,239	78	208,506
Oakland Int'l, CA .....	29	126,666	56,635	272,762	892	13	456,955
Baltimore Washington Int'l, MD .....	30	126,657	86,686	47,144	3,515	44	264,002
Tampa Int'l, FL .....	31	124,419	73,755	48,363	1,806	45	248,343
Houston Hobby, TX .....	32	121,672	6,657	108,487	588	52	237,404
Nashville Metropolitan, TN .....	33	120,661	126,262	62,251	5,875	35	315,049
Kansas City Int'l, MO .....	34	120,548	49,479	17,379	1,970	97	189,376
Raleigh Durham, NC .....	35	115,588	100,583	67,393	7,695	38	291,259
Cleveland Hopkins Int'l, OH .....	36	115,203	97,550	31,365	3,636	48	247,754
Indianapolis Int'l, IN .....	37	110,560	70,485	50,085	2,326	55	233,456
Anchorage Int'l, AK .....	38	95,915	67,822	49,943	3,800	68	217,480
Portland Int'l, OR .....	39	95,069	114,704	58,660	12,396	40	280,829
New Orleans Moisant, LA .....	40	92,217	24,225	24,486	2,400	158	143,328
Dallas Love Field, TX .....	41	92,185	25,785	93,687	1,570	73	213,227
Ontario, CA .....	42	91,748	34,406	28,260	426	145	154,840
San Jose Int'l, CA .....	43	91,247	37,244	176,581	888	37	305,960
Fort Lauderdale, FL .....	44	89,588	58,518	71,887	925	63	220,918
Louisville Standiford, KY .....	45	89,258	27,941	38,414	5,087	135	160,700
Washington Dulles Int'l, VA .....	46	85,550	132,938	54,015	7,674	41	280,177
Port Columbus, OH .....	47	82,470	51,081	78,563	2,205	71	214,319
Chicago Midway, IL .....	48	81,480	48,031	69,800	2,099	81	201,410
San Antonio Int'l, TX .....	49	80,146	31,759	105,156	6,122	62	223,183
Milwaukee Mitchell, WI .....	50	75,392	56,730	63,370	5,796	82	201,288

NOTE: Total Operations rank was based on total air traffic activity at 400 FAA-Operated Towers. Air Carrier operations rank was based on air carrier activity at 298 FAA-Operated Towers. Not all FAA-Operated Towers handle air carrier operations.

**TABLE 2.15**  
**TOTAL FAA AIR TRAFFIC ACTIVITY BY REGION AND STATE,**  
**AND BY FAA-OPERATED TOWERS, AIR ROUTE TRAFFIC CONTROL CENTERS,**  
**FLIGHT SERVICE STATIONS AND INTERNATIONAL FLIGHT SERVICE STATIONS**  
**CALENDAR YEAR 1993**

FAA Region and State	Airport Operations (Towers)	Aircraft Handled (Centers)	Total Flight Services (Flight Service Station) *
<b>TOTAL</b> .....	<b>60,270,485</b>	<b>37,790,320</b>	<b>36,799,959</b>
<b>Alaskan—Total</b> .....	<b>1,080,752</b>	<b>522,804</b>	<b>1,888,189</b>
<b>Central—Total</b> .....	<b>2,203,348</b>	<b>1,816,167</b>	<b>2,552,976</b>
Iowa .....	389,172	—	489,859
Kansas .....	445,424	1,816,167	515,938
Missouri .....	1,103,396	—	1,188,721
Nebraska .....	265,356	—	358,458
<b>Eastern—Total</b> .....	<b>8,133,627</b>	<b>4,267,515</b>	<b>4,402,189</b>
Delaware .....	175,797	—	—
District of Columbia .....	320,336	2,236,947	813,987
Maryland .....	450,829	—	84,774
New Jersey .....	1,365,644	—	580,877
New York .....	2,474,021	2,030,568	851,863
Pennsylvania .....	1,865,526	—	1,560,411
Virginia .....	1,132,312	—	99,161
West Virginia .....	349,162	—	411,116
<b>Great Lakes—Total</b> .....	<b>9,255,120</b>	<b>8,972,307</b>	<b>5,958,390</b>
Illinois .....	2,578,918	2,665,407	870,836
Indiana .....	780,563	1,946,953	757,093
Michigan .....	2,091,067	—	1,015,379
Minnesota .....	1,107,569	1,880,389	757,758
North Dakota .....	430,841	—	381,878
Ohio .....	1,268,541	2,479,558	1,127,463
South Dakota .....	155,408	—	372,355
Wisconsin .....	842,213	—	675,628
<b>New England—Total</b> .....	<b>2,788,454</b>	<b>1,621,994</b>	<b>1,689,955</b>
Connecticut .....	674,373	—	918,368
Maine .....	232,234	—	383,270
Massachusetts .....	1,458,691	1,621,994	—
New Hampshire .....	178,554	—	—
Rhode Island .....	128,455	—	—
Vermont .....	116,147	—	388,317
<b>Northwest Mountain—Total</b> .....	<b>5,443,823</b>	<b>4,195,285</b>	<b>3,445,464</b>
Colorado .....	1,586,327	1,464,954	779,273
Idaho .....	379,793	—	216,905
Montana .....	297,735	—	380,703
Oregon .....	917,305	—	510,396
Utah .....	427,992	1,353,813	323,277
Washington .....	1,732,981	1,376,518	964,607
Wyoming .....	101,690	—	270,303
<b>Southern—Total</b> .....	<b>11,240,465</b>	<b>7,808,150</b>	<b>8,269,784</b>
Alabama .....	584,548	—	718,715
Florida .....	5,238,241	3,573,557	2,870,489
Georgia .....	1,336,805	2,297,582	914,649
Kentucky .....	710,732	—	469,990
Mississippi .....	307,959	—	372,474
North Carolina .....	1,206,553	—	1,024,089
Puerto Rico .....	291,109	—	226,140
South Carolina .....	421,125	—	687,149
Tennessee .....	965,420	1,937,011	986,089
Virgin Islands .....	177,973	—	—
<b>Southwest—Total</b> .....	<b>6,710,737</b>	<b>5,165,632</b>	<b>4,401,933</b>
Arkansas .....	336,887	—	429,430
Louisiana .....	965,939	—	460,180
New Mexico .....	398,369	1,367,469	543,956
Oklahoma .....	807,757	—	595,921
Texas .....	4,201,785	3,798,163	2,372,446
<b>Western-Pacific—Total</b> .....	<b>13,414,159</b>	<b>3,420,466</b>	<b>4,191,079</b>
American Samoa .....	10,445	—	—
Arizona .....	1,915,758	—	598,108
California .....	9,893,554	3,321,054	3,029,016
Guam .....	—	99,412	—
Hawaii .....	792,942	—	189,627
Nevada .....	783,605	—	374,328
Wake Island .....	17,855	—	—

\* Includes domestic and international Flight Service Stations.

### **III. AIRPORTS**

Information about U.S. civil and joint-use landing facilities (including airports, heliports, stolports, and seaplane bases) was furnished by the FAA Office of Airport Safety and Standards. This information was obtained through physical inspection and mail solicitations, and was reported on the Airport Master Record (Form FAA 5010-1) and FAA Landing Facilities Information Request on Airports, Heliports, Stolports, and Seaplane Bases (Forms 5010-2 and 5010-5).

**TABLE 3.1**  
**U.S. CIVIL AND JOINT-USE AIRPORTS, HELIPORTS, STOLPORTS,**  
**AND SEAPLANE BASES, ON RECORD:**  
**1984-1993**

Year	All Facilities <sup>1</sup>			Airports Only			
	Total	With Runway Lights	With Paved Runways	Total	With Runway Lights	With Paved Runway	Airports of Entry <sup>2</sup>
1984 .....	16,079	4,889	6,531	12,648	4,536	4,450	59
1985 .....	16,318	4,941	6,721	12,744	4,582	4,486	57
1986 .....	16,582	4,954	6,948	12,785	4,601	4,499	76
1987 .....	17,015	4,922	7,232	12,907	4,610	4,526	80
1988 .....	17,327	4,890	7,429	12,950	4,630	4,554	80
1989 .....	17,446	4,881	7,612	12,946	4,657	4,600	84
1990 .....	17,490	4,822	7,694	12,920	4,652	4,611	81
1991 .....	17,581	4,811	7,822	12,904	4,665	4,634	81
1992 .....	17,846	4,831	7,936	13,016	4,695	4,654	81
1993 .....	18,317	4,842	8,186	13,228	4,712	4,690	73

<sup>1</sup> All facilities include airports, heliports, stolports and seaplane bases.

<sup>2</sup> Excludes landing rights airports.

**TABLE 3.2**  
**U.S. CIVIL AND JOINT-USE AIRPORTS, HELIPORTS, STOLPORTS, AND SEAPLANE BASES,**  
**AND REPORTED ABANDONMENTS ON RECORD, BY FAA REGION AND STATE**  
**DECEMBER 31, 1993**

FAA Region and State	Total Aircraft Facilities	Airports	Heliports	Stolports	Seaplane Bases	Reported Abandonments During Year
<b>Total</b> .....	<b>18,317</b>	<b>13,228</b>	<b>4,569</b>	<b>79</b>	<b>441</b>	<b>202</b>
<b>U.S. Total</b> <sup>1</sup> .....	<b>18,242</b>	<b>13,181</b>	<b>4,545</b>	<b>79</b>	<b>437</b>	<b>200</b>
<b>Alaska</b> .....	<b>560</b>	<b>437</b>	<b>20</b>	<b>0</b>	<b>103</b>	<b>3</b>
<b>Central—Total</b> .....	<b>1,483</b>	<b>1,232</b>	<b>241</b>	<b>3</b>	<b>7</b>	<b>8</b>
Iowa .....	309	232	75	1	1	1
Kansas .....	384	352	31	1	0	5
Missouri .....	489	373	110	1	5	0
Nebraska .....	301	275	25	0	1	2
<b>Eastern—Total</b> .....	<b>2,358</b>	<b>1,444</b>	<b>847</b>	<b>8</b>	<b>59</b>	<b>15</b>
Delaware .....	37	24	12	0	1	0
District .....	17	2	15	0	0	0
Maryland .....	192	138	51	1	2	0
New Jersey .....	351	114	226	0	11	1
New York .....	525	367	134	0	24	9
Pennsylvania .....	774	486	277	3	8	4
Virginia .....	358	249	103	3	3	1
West Virginia .....	104	64	29	1	10	0
<b>Great Lakes—Total</b> .....	<b>4,285</b>	<b>3,426</b>	<b>746</b>	<b>11</b>	<b>102</b>	<b>82</b>
Illinois .....	920	673	238	2	7	22
Indiana .....	597	485	105	2	5	14
Michigan .....	459	380	74	2	3	6
Minnesota .....	488	378	37	1	72	7
No. Dakota .....	445	431	13	0	1	12
Ohio .....	733	530	199	4	0	13
So. Dakota .....	160	147	12	0	1	3
Wisconsin .....	483	402	68	0	13	5
<b>New England—Total</b> .....	<b>717</b>	<b>351</b>	<b>294</b>	<b>4</b>	<b>68</b>	<b>6</b>
Connecticut .....	138	55	76	1	6	2
Maine .....	159	104	17	0	38	3
Massachusetts .....	230	85	127	1	17	0
New Hampshire .....	93	46	42	1	4	0
Rhode Island .....	26	10	15	0	1	0
Vermont .....	71	51	17	1	2	1
<b>Northwest Mountain—Total</b> .....	<b>1,883</b>	<b>1,402</b>	<b>448</b>	<b>10</b>	<b>23</b>	<b>20</b>
Colorado .....	391	221	166	4	0	13
Idaho .....	218	186	28	0	4	0
Montana .....	234	209	21	2	2	2
Oregon .....	396	305	87	2	2	1
Utah .....	119	84	35	0	0	1
Washington .....	424	311	96	2	15	3
Wyoming .....	101	86	15	0	0	0
<b>Southern—Total</b> .....	<b>2,622</b>	<b>1,876</b>	<b>673</b>	<b>29</b>	<b>44</b>	<b>16</b>
Alabama .....	235	172	60	0	3	0
Florida .....	778	486	248	11	33	5
Georgia .....	409	302	103	4	0	0
Kentucky .....	177	134	42	1	0	2
Mississippi .....	219	176	43	0	0	2
No. Carolina .....	352	289	58	4	1	4
Puerto Rico .....	31	16	14	0	0	0
So. Carolina .....	165	141	24	0	0	0
Tennessee .....	247	158	77	9	3	1
Virgin Islands .....	9	2	4	0	3	
<b>Southwest—Total</b> .....	<b>2,981</b>	<b>2,162</b>	<b>787</b>	<b>9</b>	<b>23</b>	<b>41</b>
Arkansas .....	252	179	73	0	0	2
Louisiana .....	433	205	207	0	21	12
New Mexico .....	171	150	20	0	1	3
Oklahoma .....	415	326	87	1	1	4
Texas .....	1,710	1302	400	8	0	20
<b>Western-Pacific—Total</b> .....	<b>1,428</b>	<b>898</b>	<b>513</b>	<b>5</b>	<b>12</b>	<b>11</b>
Arizona .....	280	189	90	1	0	1
California .....	942	550	377	3	12	10
Hawaii .....	47	32	15	0	0	0
Nevada .....	124	98	25	1	0	0
South Pacific <sup>2</sup> .....	35	29	6	0	0	0

<sup>1</sup> Excludes Puerto, Virgin Islands, and South Pacific.

<sup>2</sup> American Samoa, Guam, and Trust Territories.

**TABLE 3.3**  
**U.S. CIVIL AND JOINT-USE AIRPORTS, HELIPORTS, STOLPORTS, AND SEAPLANE BASES,**  
**ON RECORD, BY TYPE OF OWNERSHIP**  
**DECEMBER 31, 1993**

FAA Region and State	Total Facilities	By Ownership		Paved Facilities		Unpaved Facilities	
		Private	Public	Lighted	Not Lighted	Lighted	Not Lighted
<b>Total</b> .....	<b>18,317</b>	<b>13,160</b>	<b>5,157</b>	<b>3,973</b>	<b>4,213</b>	<b>869</b>	<b>9,262</b>
<b>U.S. Total 1</b> .....	<b>18,242</b>	<b>13,135</b>	<b>5,107</b>	<b>3,949</b>	<b>4,189</b>	<b>869</b>	<b>9,235</b>
<b>Alaska</b> .....	<b>560</b>	<b>171</b>	<b>389</b>	<b>46</b>	<b>18</b>	<b>106</b>	<b>390</b>
<b>Central—Total</b> .....	<b>1,483</b>	<b>989</b>	<b>494</b>	<b>404</b>	<b>243</b>	<b>103</b>	<b>733</b>
Iowa .....	309	176	133	100	69	42	98
Kansas .....	384	253	131	105	34	26	219
Missouri .....	489	352	137	121	107	22	239
Nebraska .....	301	208	93	78	33	13	177
<b>Eastern—Total</b> .....	<b>2,358</b>	<b>2,010</b>	<b>348</b>	<b>395</b>	<b>615</b>	<b>104</b>	<b>1,244</b>
Delaware .....	37	33	4	7	7	5	18
District .....	17	9	8	4	12	0	1
Maryland .....	192	172	20	37	40	11	104
New Jersey .....	351	304	47	39	114	11	187
New York .....	525	434	91	94	119	38	274
Pennsylvania .....	774	701	73	108	207	29	430
Virginia .....	358	284	74	75	83	9	191
West Virginia .....	104	73	31	31	33	1	39
<b>Great Lakes—Total</b> .....	<b>4,285</b>	<b>3,373</b>	<b>912</b>	<b>814</b>	<b>597</b>	<b>295</b>	<b>2,579</b>
Illinois .....	920	800	120	113	176	54	577
Indiana .....	597	509	88	90	80	30	397
Michigan .....	459	323	136	130	61	50	218
Minnesota .....	488	337	151	105	36	35	312
No. Dakota .....	445	347	98	68	18	29	330
Ohio .....	733	598	135	144	146	45	398
So. Dakota .....	160	82	78	54	12	21	73
Wisconsin .....	483	377	106	110	68	31	274
<b>New England—Total</b> .....	<b>717</b>	<b>571</b>	<b>146</b>	<b>128</b>	<b>222</b>	<b>13</b>	<b>354</b>
Connecticut .....	138	122	16	24	63	3	48
Maine .....	159	112	47	30	21	3	105
Massachusetts .....	230	193	37	40	85	4	101
New Hampshire .....	93	76	17	17	34	2	40
Rhode Island .....	26	17	9	7	12	0	7
Vermont .....	71	51	20	10	7	1	53
<b>Northwest Mountain—Total</b> .....	<b>1,883</b>	<b>1,197</b>	<b>686</b>	<b>440</b>	<b>417</b>	<b>71</b>	<b>955</b>
Colorado .....	391	296	95	70	104	15	202
Idaho .....	218	86	132	45	34	3	136
Montana .....	234	111	123	73	29	13	119
Oregon .....	396	293	103	64	98	13	221
Utah .....	119	60	59	44	40	1	34
Washington .....	424	299	125	110	95	23	196
Wyoming .....	101	52	49	34	17	3	47
<b>Southern—Total</b> .....	<b>2,622</b>	<b>1,775</b>	<b>847</b>	<b>685</b>	<b>641</b>	<b>90</b>	<b>1,206</b>
Alabama .....	235	132	103	90	63	8	74
Florida .....	778	616	162	118	209	26	425
Georgia .....	409	266	143	105	95	11	198
Kentucky .....	177	104	73	55	53	4	65
Mississippi .....	219	128	91	74	50	7	88
No. Carolina .....	352	257	95	93	63	20	176
So. Carolina .....	165	96	69	56	24	8	77
Tennessee .....	247	159	88	81	67	6	93
Puerto Rico .....	31	14	17	11	16	0	4
Virgin Islands .....	9	3	6	2	1	0	6
<b>Southwest—Total</b> .....	<b>2,981</b>	<b>2,158</b>	<b>823</b>	<b>700</b>	<b>862</b>	<b>69</b>	<b>1,350</b>
Arkansas .....	252	138	114	83	86	5	78
Louisiana .....	433	325	108	75	176	2	180
New Mexico .....	171	95	76	45	35	2	89
Oklahoma .....	415	256	159	118	98	16	183
Texas .....	1710	1,344	366	379	467	44	820
<b>Western-Pacific—Total</b> .....	<b>1,428</b>	<b>916</b>	<b>512</b>	<b>361</b>	<b>598</b>	<b>18</b>	<b>451</b>
Arizona .....	280	191	89	69	90	4	117
California .....	942	628	314	237	446	10	249
Hawaii .....	47	29	18	13	26	1	7
Nevada .....	124	60	64	31	29	3	61
South Pacific <sup>2</sup> .....	35	8	27	11	7	0	17

<sup>1</sup> Excludes Puerto, Virgin Islands, and South Pacific.

<sup>2</sup> American Samoa, Guam, and Trust Territories.

**TABLE 3.4**  
**U.S. CIVIL AND JOINT-USE AIRPORTS, HELIPORTS, STOLPORTS, AND SEAPLANE BASES**  
**ON RECORD, BY LENGTH OF LONGEST RUNWAY<sup>1</sup>, BY FAA REGION AND STATE**  
**DECEMBER 31, 1993**

FAA State and Region	Total	Under 3000	3000- 4000	4000- 5000	5000- 6000	6000- 7000	7000- 8000	8000- 9000	9000- 10,000	10,000- Over
<b>Total</b> .....	<b>18,317</b>	<b>12,435</b>	<b>2662</b>	<b>1300</b>	<b>922</b>	<b>364</b>	<b>195</b>	<b>120</b>	<b>69</b>	<b>250</b>
<b>U.S. Total<sup>2</sup></b> .....	<b>18,242</b>	<b>12,395</b>	<b>2655</b>	<b>1296</b>	<b>918</b>	<b>356</b>	<b>189</b>	<b>119</b>	<b>67</b>	<b>247</b>
<b>Alaska</b> .....	<b>560</b>	<b>299</b>	<b>77</b>	<b>48</b>	<b>48</b>	<b>21</b>	<b>10</b>	<b>6</b>	<b>5</b>	<b>46</b>
<b>Central—Total</b> .....	<b>1,483</b>	<b>1,046</b>	<b>239</b>	<b>103</b>	<b>39</b>	<b>21</b>	<b>13</b>	<b>7</b>	<b>3</b>	<b>12</b>
Iowa .....	309	217	35	37	9	7	0	3	1	0
Kansas .....	384	266	65	25	14	4	7	0	0	3
Missouri .....	489	363	80	18	9	6	4	1	1	7
Nebraska .....	301	200	59	23	7	4	2	3	1	2
<b>Eastern—Total</b> .....	<b>2,358</b>	<b>1,918</b>	<b>192</b>	<b>88</b>	<b>75</b>	<b>27</b>	<b>17</b>	<b>7</b>	<b>11</b>	<b>23</b>
Delaware .....	37	27	5	2	2	0	1	0	0	0
District .....	17	15	0	0	0	1	0	0	0	1
Maryland .....	192	155	23	5	6	1	0	1	1	0
New Jersey .....	351	308	20	6	10	2	1	1	1	2
New York .....	525	397	51	21	17	8	7	2	4	18
Pennsylvania .....	774	676	43	24	13	6	6	1	3	2
Virginia .....	358	277	35	23	14	5	0	2	2	0
West Virginia .....	104	63	15	7	13	4	2	0	0	0
<b>Great Lakes—Total</b> .....	<b>4,285</b>	<b>3,203</b>	<b>559</b>	<b>225</b>	<b>125</b>	<b>62</b>	<b>29</b>	<b>24</b>	<b>8</b>	<b>50</b>
Illinois .....	920	796	55	30	17	10	3	5	0	4
Indiana .....	597	486	52	28	15	6	2	1	1	6
Michigan .....	459	311	75	27	22	11	6	1	1	5
Minnesota .....	488	276	88	38	32	17	8	6	1	22
No. Dakota .....	445	334	77	21	6	3	2	1	1	0
Ohio .....	733	573	88	41	16	5	2	2	0	0
So. Dakota .....	160	79	50	17	5	5	2	2	0	0
Wisconsin .....	483	348	74	23	12	5	4	6	3	8
<b>New England—Total</b> .....	<b>717</b>	<b>542</b>	<b>253</b>	<b>36</b>	<b>40</b>	<b>11</b>	<b>11</b>	<b>4</b>	<b>2</b>	<b>18</b>
Connecticut .....	138	119	5	6	5	0	1	0	1	1
Maine .....	159	85	18	15	14	5	5	3	0	14
Massachusetts .....	230	187	16	7	12	3	1	1	1	2
New Hampshire .....	93	72	6	5	5	3	1	0	0	1
Rhode Island .....	26	21	0	2	1	0	2	0	0	0
Vermont .....	71	58	8	1	3	0	1	0	0	0
<b>Northwest Mountain—Total</b> .....	<b>1,883</b>	<b>1,146</b>	<b>295</b>	<b>178</b>	<b>2126</b>	<b>50</b>	<b>27</b>	<b>15</b>	<b>17</b>	<b>29</b>
Colorado .....	391	241	50	39	25	11	6	6	5	8
Idaho .....	218	114	45	37	9	4	2	1	3	3
Montana .....	234	98	69	36	15	5	1	2	4	4
Oregon .....	396	302	45	16	23	6	1	1	0	2
Utah .....	119	40	19	21	20	9	6	2	1	1
Washington .....	424	316	51	14	20	7	4	0	3	9
Wyoming .....	101	35	16	15	14	8	7	3	1	2
<b>Southern—Total</b> .....	<b>2,622</b>	<b>1,613</b>	<b>478</b>	<b>225</b>	<b>164</b>	<b>60</b>	<b>25</b>	<b>23</b>	<b>8</b>	<b>26</b>
Alabama .....	235	133	43	25	15	10	1	3	2	3
Florida .....	778	501	122	70	35	16	11	9	2	12
Georgia .....	409	256	76	29	36	8	0	2	1	1
Kentucky .....	177	118	22	21	9	4	1	0	0	2
Mississippi .....	219	110	72	12	9	10	1	4	1	0
No. Carolina .....	352	224	62	31	22	4	5	1	0	3
Puerto Rico .....	31	20	4	2	1	2	0	0	0	2
So. Carolina .....	165	88	42	15	15	2	1	2	0	0
Tennessee .....	247	158	35	20	22	4	2	2	2	2
Virgin Islands .....	9	5	0	0	0	0	3	0	0	1
<b>Southwest—Total</b> .....	<b>2,981</b>	<b>1,797</b>	<b>559</b>	<b>268</b>	<b>214</b>	<b>59</b>	<b>35</b>	<b>20</b>	<b>7</b>	<b>22</b>
Arkansas .....	252	148	46	28	19	8	1	1	0	1
Louisiana .....	433	308	58	18	33	3	3	2	1	7
New Mexico .....	171	49	25	27	37	11	12	7	0	3
Oklahoma .....	415	272	77	30	21	7	3	1	1	3
Texas .....	1710	1020	353	165	104	30	16	9	5	8
<b>Western-Pacific—Total</b> .....	<b>1,428</b>	<b>871</b>	<b>210</b>	<b>129</b>	<b>91</b>	<b>53</b>	<b>28</b>	<b>14</b>	<b>8</b>	<b>24</b>
Arizona .....	280	142	38	43	25	15	9	6	0	2
California .....	942	640	149	59	39	21	8	5	4	17
Hawaii .....	47	33	5	2	2	1	1	0	1	2
Nevada .....	124	41	15	23	22	10	7	2	1	3
South Pacific <sup>3</sup> .....	35	15	3	2	3	6	3	1	2	0

<sup>1</sup> Length in feet.

<sup>2</sup> Excludes Puerto, Virgin Islands, and South Pacific.

<sup>3</sup> American Samoa, Guam, and Trust Territories.

**TABLE 3.5**  
**U.S. CIVIL AND JOINT-USE AIRPORTS, HELIPORTS, STOLPORTS, AND SEAPLANE BASES**  
**ON RECORD, BY FAA REGION AND STATE AND OTHER AREAS**  
**DECEMBER 31, 1984-1993**

FAA Region and State	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
<b>Total</b> .....	<b>18,317</b>	<b>17,846</b>	<b>17,581</b>	<b>17,490</b>	<b>17,446</b>	<b>17,327</b>	<b>17,015</b>	<b>16,582</b>	<b>16,318</b>	<b>16,079</b>
<b>U.S. Total</b> <sup>1</sup> .....	<b>18,242</b>	<b>17,769</b>	<b>17,509</b>	<b>17,419</b>	<b>17,377</b>	<b>17,259</b>	<b>16,949</b>	<b>16,516</b>	<b>16,252</b>	<b>16,013</b>
Alaska .....	560	559	545	602	593	603	593	614	610	609
<b>Central—Total</b> .....	<b>1,483</b>	<b>1,443</b>	<b>1,453</b>	<b>1,401</b>	<b>1,406</b>	<b>1,417</b>	<b>1,437</b>	<b>1,421</b>	<b>1,437</b>	<b>1,430</b>
Iowa .....	309	293	290	273	273	274	277	279	278	282
Kansas .....	384	382	394	386	385	390	389	382	385	384
Missouri .....	489	473	462	440	431	431	440	429	437	423
Nebraska .....	301	295	307	302	317	322	331	331	337	341
<b>Eastern—Total</b> .....	<b>2,358</b>	<b>2,296</b>	<b>2,246</b>	<b>2,192</b>	<b>2,208</b>	<b>2,192</b>	<b>2,175</b>	<b>2,134</b>	<b>2,076</b>	<b>2,048</b>
Delaware .....	37	36	34	33	34	34	35	37	36	36
District .....	17	16	16	16	17	16	15	15	15	15
Maryland .....	192	187	168	158	162	157	154	155	151	149
New Jersey .....	351	334	329	321	322	317	317	286	295	294
New York .....	525	520	512	497	493	506	507	495	485	480
Pennsylvania .....	774	757	752	742	765	756	744	755	719	708
Virginia .....	358	345	341	331	322	313	308	299	282	274
West. Virginia .....	104	101	94	94	93	93	95	92	93	92
<b>Great Lakes—Total</b> .....	<b>4,285</b>	<b>4,205</b>	<b>4,219</b>	<b>4,222</b>	<b>4,235</b>	<b>4,190</b>	<b>4,135</b>	<b>4,071</b>	<b>4,060</b>	<b>4,027</b>
Illinois .....	920	917	924	928	938	924	913	894	888	901
Indiana .....	597	576	576	566	554	545	530	518	523	495
Michigan .....	459	435	432	431	434	434	431	419	422	427
Minnesota .....	488	483	477	472	475	475	477	472	479	480
No. Dakota .....	445	450	464	475	480	486	487	499	484	457
Ohio .....	733	716	714	715	720	714	716	697	690	689
S. Dakota .....	160	157	160	159	158	155	158	161	164	165
Wisconsin .....	483	471	472	476	476	457	423	411	410	413
<b>New England—Total</b> .....	<b>717</b>	<b>669</b>	<b>662</b>	<b>648</b>	<b>612</b>	<b>595</b>	<b>568</b>	<b>536</b>	<b>515</b>	<b>509</b>
Connecticut .....	138	131	134	132	130	128	120	112	108	104
Maine .....	159	156	159	157	148	146	144	144	144	143
Massachusetts .....	230	205	197	195	181	170	158	141	131	130
New Hampshire .....	93	84	79	74	69	67	62	58	53	54
Rhode Island .....	26	22	23	24	23	23	22	20	18	18
Vermont .....	71	71	70	66	61	61	62	61	61	60
<b>Northwest Mountain—</b>										
<b>Total</b> .....	<b>1,883</b>	<b>1,868</b>	<b>1,808</b>	<b>1,804</b>	<b>1,805</b>	<b>1,812</b>	<b>1,737</b>	<b>1,685</b>	<b>1,662</b>	<b>1,626</b>
Colorado .....	391	395	373	384	385	396	333	323	321	315
Idaho .....	218	212	211	211	211	209	207	205	202	198
Montana .....	234	234	227	220	214	212	210	203	200	194
Oregon .....	396	387	378	370	372	367	366	351	342	336
Utah .....	119	118	112	112	111	113	109	105	101	97
Washington .....	424	423	411	410	412	413	408	396	395	385
Wyoming .....	101	99	96	97	100	102	104	102	101	101
<b>Southern—Total</b> .....	<b>2,622</b>	<b>2,459</b>	<b>2,364</b>	<b>2,305</b>	<b>2,285</b>	<b>2,293</b>	<b>2,165</b>	<b>2,099</b>	<b>2,002</b>	<b>1,961</b>
Alabama .....	235	208	203	196	195	201	193	183	174	173
Florida .....	778	732	698	662	645	669	607	594	557	542
Georgia .....	409	382	375	368	363	352	334	325	304	301
Kentucky .....	177	153	144	143	148	148	139	139	134	129
Mississippi .....	219	216	207	207	207	205	194	190	188	180
No. Carolina .....	352	344	336	331	332	322	316	307	292	288
Puerto Rico .....	165	153	29	29	29	28	27	30	31	31
S. Carolina .....	247	229	146	150	150	152	146	137	139	139
Tennessee .....	31	33	218	211	208	208	201	186	176	171
Virgin Islands .....	9	9	8	8	8	8	8	8	7	7
<b>Southwest—Total</b> .....	<b>2,981</b>	<b>2,953</b>	<b>2,884</b>	<b>2,923</b>	<b>2,910</b>	<b>2,833</b>	<b>2,818</b>	<b>2,661</b>	<b>2,624</b>	<b>2,541</b>
Arkansas .....	252	243	236	230	218	195	173	167	163	156
Louisiana .....	433	426	413	426	419	385	381	357	353	317
New Mexico .....	171	170	170	164	170	167	174	168	169	167
Oklahoma .....	415	411	403	411	406	399	403	341	336	335
Texas .....	1710	1,703	1,662	1,692	1,697	1,687	1,687	1,628	1,603	1,566
<b>Western-Pacific—Total</b> .....	<b>1,428</b>	<b>1,394</b>	<b>1,400</b>	<b>1,393</b>	<b>1,392</b>	<b>1,392</b>	<b>1,387</b>	<b>1,361</b>	<b>1,332</b>	<b>1,328</b>
Arizona .....	280	271	273	272	270	272	265	262	246	244
California .....	942	920	922	918	910	907	909	895	887	881
Hawaii .....	47	47	48	50	53	54	54	51	50	51
Nevada .....	124	121	122	119	127	127	128	125	121	124
South Pacific <sup>2</sup> .....	35	35	35	34	32	32	31	28	28	28

<sup>1</sup> Excludes Puerto, Virgin Islands, and South Pacific.

<sup>2</sup> American Samoa, Guam, and Trust Territories.



**TABLE 3.6**  
**AIRPORT IMPROVEMENT PROGRAM: FISCAL YEAR 1993**  
(Excludes Amendment to Grants) (Thousands of Dollars)

FAA Region and State	Primary		Commercial		Reliever		General Aviation		System Planning		Total	
	Total Federal Funds	Total Projects	Total Federal Funds	Total Projects	Total Federal Funds	Total Projects	Total Federal Funds	Total Projects	Total Federal Funds	Total Projects	Total Federal Funds	Total Projects
<b>Total</b> .....	<b>1,298,706</b>	<b>719</b>	<b>41,167</b>	<b>72</b>	<b>180,206</b>	<b>163</b>	<b>201,018</b>	<b>406</b>	<b>10,686</b>	<b>65</b>	<b>1,731,783</b>	<b>1,425</b>
<b>US—Total</b> <sup>1</sup> .....	<b>1,266,109</b>	<b>702</b>	<b>39,007</b>	<b>70</b>	<b>180,206</b>	<b>163</b>	<b>200,953</b>	<b>405</b>	<b>10,686</b>	<b>65</b>	<b>1,696,961</b>	<b>1,405</b>
<b>Alaska</b> .....	<b>28,954</b>	<b>30</b>	<b>2,414</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>28,593</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>59,961</b>	<b>56</b>
<b>Central—Total</b> .....	<b>48,720</b>	<b>30</b>	<b>4,175</b>	<b>7</b>	<b>9,507</b>	<b>9</b>	<b>12,526</b>	<b>24</b>	<b>755</b>	<b>5</b>	<b>75,683</b>	<b>75</b>
Iowa .....	10,023	12	2,569	1	6,069	2	3,752	8	226	1	22,639	24
Kansas .....	5,089	3	643	3	2,785	5	5,291	10	163	2	13,971	23
Missouri .....	23,918	8	485	2	0	0	0	0	152	1	24,555	11
Nebraska .....	9,690	7	478	1	653	2	3,483	6	214	1	14,518	17
<b>Eastern—Total</b> .....	<b>179,411</b>	<b>119</b>	<b>9,993</b>	<b>17</b>	<b>25,867</b>	<b>44</b>	<b>23,359</b>	<b>70</b>	<b>1,952</b>	<b>16</b>	<b>240,582</b>	<b>266</b>
Delaware .....	0	0	750	1	0	0	112	1	35	1	897	3
District .....	0	0	0	0	0	0	0	0	191	1	191	1
Maryland .....	8,544	5	338	1	2,642	2	1,193	4	0	0	12,717	12
New Jersey .....	9,906	7	2,165	2	5,099	8	837	1	90	1	18,097	19
New York .....	61,085	52	2,457	9	8,673	16	8,966	22	259	8	81,440	107
Pennsylvania .....	52,487	31	0	0	2,936	9	6,968	21	400	2	62,791	63
Virginia .....	42,676	16	795	2	6,517	9	3,487	12	527	2	54,002	41
W. Virginia .....	4,713	8	3,488	2	0	0	1,796	9	450	1	10,447	20
<b>Great Lakes—Total</b> .....	<b>197,125</b>	<b>126</b>	<b>5,907</b>	<b>13</b>	<b>34,506</b>	<b>20</b>	<b>24,133</b>	<b>54</b>	<b>1,035</b>	<b>6</b>	<b>262,706</b>	<b>219</b>
Illinois .....	56,894	24	0	0	22,020	2	0	0	238	1	79,152	27
Indiana .....	27,803	14	3,381	2	4,308	4	5,089	7	0	0	40,581	27
Michigan .....	35,892	26	0	0	1,043	2	0	0	200	2	37,135	30
Minnesota .....	26,611	12	737	4	72	1	4,885	8	462	2	32,767	25
N. Dakota .....	7,256	9	818	4	0	0	4,182	7	0	0	12,256	20
Ohio .....	26,630	20	0	0	5,563	10	7,247	23	0	0	39,440	53
S. Dakota .....	1,793	5	971	3	0	0	2,730	11	135	1	5,629	20
Wisconsin .....	14,246	16	0	0	1,500	1	0	0	0	0	15,746	17
<b>New England—Total</b> .....	<b>60,030</b>	<b>41</b>	<b>1,778</b>	<b>5</b>	<b>5,918</b>	<b>5</b>	<b>11,850</b>	<b>29</b>	<b>383</b>	<b>4</b>	<b>79,959</b>	<b>84</b>
Connecticut .....	1,964	5	0	0	4,841	2	1,605	3	0	0	8,410	10
Maine .....	3,270	7	1,303	2	0	0	1,518	5	232	2	6,323	16
Massachusetts .....	21,330	13	475	3	159	2	2,205	8	51	1	24,220	27
New Hampshire .....	17,779	8	0	0	918	1	4,528	10	0	0	23,225	19
Rhode Island .....	12,027	4	0	0	0	0	0	0	0	0	12,027	4
Vermont .....	3,660	4	0	0	0	0	1,994	3	100	1	5,754	8
<b>Northwest Mountain—Total</b> .....	<b>156,307</b>	<b>78</b>	<b>4,668</b>	<b>13</b>	<b>15,485</b>	<b>15</b>	<b>28,392</b>	<b>66</b>	<b>1,004</b>	<b>11</b>	<b>205,856</b>	<b>183</b>
Colorado .....	61,992	17	1,799	4	9,888	7	5,892	6	200	3	79,771	37
Idaho .....	4,969	7	0	0	282	1	2,970	7	54	1	8,275	16
Montana .....	8,290	7	0	0	0	0	4,225	10	73	1	12,588	18
Oregon .....	11,835	10	336	1	779	2	4,579	11	170	1	17,699	25
Utah .....	32,798	7	1,188	5	1,875	3	3,577	12	178	2	39,616	29
Washington .....	28,939	18	626	2	2,661	2	3,975	10	190	1	36,391	33
Wyoming .....	7,484	12	719	1	0	0	3,174	10	139	2	11,516	25
<b>Southern—Total</b> .....	<b>269,774</b>	<b>132</b>	<b>4,332</b>	<b>6</b>	<b>32,713</b>	<b>29</b>	<b>29,283</b>	<b>67</b>	<b>2,377</b>	<b>6</b>	<b>338,479</b>	<b>240</b>
Alabama .....	16,256	12	493	1	667	1	5,284	7	1,038	2	23,738	23
Florida .....	95,878	37	1,832	2	19,530	16	4,686	11	0	0	121,926	66
Georgia .....	26,106	13	0	0	7,210	4	4,837	10	890	3	39,043	30
Kentucky .....	32,821	9	0	0	453	2	3,224	8	0	0	36,498	19
Mississippi .....	3,223	9	507	1	445	1	2,483	9	0	0	6,658	20
N. Carolina .....	30,435	20	0	0	0	0	0	0	0	0	30,435	20
Puerto Rico .....	9,434	8	0	0	0	0	65	1	0	0	9,499	9
S. Carolina .....	18,336	8	0	0	0	0	5,462	11	0	0	23,798	19
Tennessee .....	35,121	14	1,500	2	4,408	5	3,242	10	449	1	44,720	32
Virgin Islands .....	2,164	2	0	0	0	0	0	0	0	0	2,164	2
<b>Southwest—Total</b> .....	<b>154,075</b>	<b>83</b>	<b>2,840</b>	<b>3</b>	<b>23,626</b>	<b>18</b>	<b>15,543</b>	<b>35</b>	<b>1,754</b>	<b>8</b>	<b>197,838</b>	<b>147</b>
Arkansas .....	5,867	7	0	0	433	1	3,022	10	0	0	9,322	18
Louisiana .....	29,706	13	0	0	1,326	2	3,359	8	624	4	35,015	27
New Mexico .....	9,023	6	2,840	3	0	0	4,881	6	125	1	16,869	16
Oklahoma .....	16,425	9	0	0	3,118	3	4,281	11	151	1	23,975	24
Texas .....	93,054	48	0	0	18,749	12	0	0	854	2	112,657	62
<b>Western-Pacific—Total</b> ..	<b>204,310</b>	<b>80</b>	<b>5,060</b>	<b>6</b>	<b>32,584</b>	<b>23</b>	<b>27,339</b>	<b>37</b>	<b>1,426</b>	<b>9</b>	<b>270,719</b>	<b>155</b>
Arizona .....	13,841	10	1,600	3	7,212	7	4,982	8	434	3	28,069	31
California .....	119,926	46	1,300	1	18,700	13	18,109	22	659	4	158,694	86
Hawaii .....	25,065	9	0	0	0	0	288	2	202	1	25,555	12
Nevada .....	24,479	8	0	0	6,672	3	3,960	5	131	1	35,242	17
South Pacific .....	20,999	7	2,160	2	0	0	0	0	0	0	23,159	9

<sup>1</sup>Excludes Puerto Rico, Virgin Islands, and South Pacific.

<sup>2</sup>American Samoa, Guam, North Mariana, and Trust Territories.

Note: Excludes State Block Grants: Illinois 3 24,033  
Michigan 1 17,957  
Missouri 1 14,458  
New Jersey 1 3,363  
N. Carolina 1 14,637  
Texas 1 15,187  
Wisconsin 1 8,346  
Total 9 97,981

#### IV. AIRPORT ACTIVITY OF CERTIFICATED ROUTE AIR CARRIERS

This chapter covers only the large scheduled certificated air carriers;\* and thus excludes the charter only, small certificated, commuter, intrastate and foreign-flag air carriers. Note that this chapter covers only a subset of the carriers covered by Chapter VI—U.S. Certificated Air Carriers—Operating Data.

The data presented in this chapter were obtained from information reported quarterly to the Department of Transportation's Research and Special Programs Administration (RSPA) by the large scheduled certificated air carriers on Schedules T-100 and T-3, RSPA Form 41, Uniform System of Accounts and Reports for Large Certificated Air Carriers. These statistics summarize, scheduled and non scheduled service revenue; passenger enplanements; aircraft departures; and tons of freight and mail enplaned at certificated points in the 50 States, the District of Columbia, and other U.S. areas served by the carriers.

The activity information in Tables 4.5-4.9 is presented by "hubs". Air traffic hubs are geographical areas, and are based on the percentage of total passengers enplaned in the area. A hub may have more than one airport in it. This definition of hub should not be confused with the definition being used by the airlines in describing their "hub and spoke" structures. The hubs constitute a primary focal point for the transportation research programs of the FAA, and the analyses of individual cities within an area are treated in relationship to the entire area.

Individual communities fall into four hub classifications as determined by each community's percentage of the total enplaned revenue passengers in all services and all operations of U.S. certificated route air carriers within the 50 States, the District of Columbia, and other U.S. areas. Classifications in this issues are based on 468,313,029 total enplaned revenue passengers.

The percentage and number of enplaned passengers in the hub classifications for 12 months ending December 31, 1993 are:

Hub Classification	Percentage of Total Enplaned Passengers	Number of Enplaned Passengers
Large (L) .....	1.00 or more	4,683,130 or more
Medium (M) .....	0.25 to 0.99	1,170,783 to 4,683,130
Small (S) .....	0.05 to 0.24	234,157 to 1,170,783
Nonhub (N) .....	Less than 0.05	Less than 234,157

During 1993 there were 125 air traffic hubs representing 19% of the 655 air traffic hubs and nonhubs in the 50 states, the District of Columbia, and other U. S. areas receiving air carrier service during the year. The dominance of the hubs in air traffic patterns is brought out by the fact that 98% of passenger enplanements were recorded at these 125 hubs. The table below shows the number of hubs/nonhubs and the number of airports in those hubs. It also shows the number and percentage of passenger enplanements at the hubs/nonhubs.

Hub Classification	Number of Hubs/Nonhubs	Number of Airports	Passengers Enplaned	Passengers Percent
Large .....	25	68	340,048,661	72.61
Medium .....	30	50	79,032,913	16.88
Small .....	68	83	37,334,956	7.97
Nonhub .....	530	561	11,896,499	2.54
TOTAL .....	655	762	468,331,029	100.00

\* Large Certificated Air Carrier—carrier holding a certificate issued under Section 401 of the Federal Aviation Act of 1958 and operating aircraft designed to have a maximum passenger seating capacity of more than 60 seats or a maximum payload capacity of more than 18,000 pounds or conducting international operations.

# December 31, 1993

**LEGEND**

- Large Hubs 27
- Medium Hubs 30
- Small Hubs 68

**ALASKA**

**HAWAII**

**PUERTO RICO**

**VIRGIN ISLANDS**

**GUAM**

**MARIANA ISLANDS**

## LEGEND

- Large Hubs 27
- Medium Hubs 30
- Small Hubs 68

MARIANA

GUA

ALASKA

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**ATO RICCO**

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Sail

**TABLE 4.1**  
**LARGE SCHEDULED CERTIFICATED AIR CARRIERS**  
**AS OF DECEMBER 31, 1993**

Aerial Transit	Markair
Air Transport	MGM Grand
Air Wisconsin	Miami Air
Airmark	Midwest Express Airlines
Alaska Airlines	Million
Aloha Airlines	Morris
American West	North American
American Airlines	Northern Air Cargo
American Int'l.	Northwest Airlines
American Trans Air	Patriot
Amerijet	Private Jet
Arrow Air	Reeve Aleutian Airways
Atlantic Southeast	Reno
Atlas	Rich
AV Atlantic	Ryan
Buffalo	Sierra Pacific
Business Express	Simmons
Capitol Air	Southern Air
Carnival	Southwest Airlines
Casino Express	Spirit
Challenge Air Transport	Sum Country
Continental Air Lines	Tower
Continental Micronesia	Trans Air Link
Delta Air Lines	Trans American
DHL	Trans States
Eagle	Trans World Airlines
Emery Worldwide	U.S. Air
Empire	U.S. Air Shuttle
Evergreen	Ultrair
Executive Airlines	United Air Lines
Express One	United Parcel
Federal Express	UFS
Fine Airlines	Valujet
Florida West	Westair
Great American	World
Hawaiian Airlines	Worldwide
Horizon Air	Wrangler
Int'l Cargo Express	Zantop
Kiwi	

**TABLE 4.2 \***  
**AMERICAN FLAG AIRLINE TRAFFIC ENPLANED SYSTEM TOTAL**  
**LARGE SCHEDULED CERTIFICATED AIR CARRIERS**  
**SCHEDULED AND NONSCHEDULED OPERATIONS**  
**1984-1993**

Year	Enplaned Passengers			Air Carrier Aircraft Departures	Tons of Enplaned Mail	Tons of Enplaned Cargo
	Total	Domestic	International			
1984 .....	344,831,718	321,136,409	23,695,309	5,449,541	1,389,154.7	3,579,216.1
1985 .....	381,108,118	356,103,027	25,005,091	5,696,217	1,486,900.6	3,415,759.7
1986 .....	418,563,577	393,267,950	25,295,582	6,401,599	2,066,173.6	4,718,544.1
1987 .....	448,913,726	417,869,993	31,043,733	6,640,400	1,621,734.2	5,073,264.9
1988 .....	456,026,372	420,326,215	35,700,157	6,724,445	1,717,738.7	5,860,039.0
1989 .....	455,263,066	417,644,895	37,618,171	6,648,452	1,631,316.3	6,573,790.5
1990 <sup>1</sup> .....	438,544,001	NA	NA	6,641,681	1,566,098.1	4,732,726.1
1991 <sup>1</sup> .....	428,319,248	NA	NA	6,545,000	1,562,990.7	4,854,513.1
1992 <sup>1</sup> .....	447,625,988	NA	NA	6,606,609	1,682,631.6	5,053,677.9
1993 <sup>1</sup> .....	468,313,029	NA	NA	7,193,841	1,819,203.1	6,383,887.2

\* Includes operations of certificated all-cargo carriers.

<sup>1</sup> Excludes traffic enplaned in foreign countries.

NA—No longer available.

Source: RSPA-FAA Airport Activity Statistics of Certificated Route Air Carriers.

**TABLE 4.3 \***  
**AMERICAN FLAG AIRLINE TRAFFIC ENPLANED—50 STATES**  
**LARGE SCHEDULED CERTIFICATED AIR CARRIERS**  
**SCHEDULED AND NONSCHEDULED OPERATIONS**  
**1984-1993**

Year	Enplaned Passengers			Air Carrier Aircraft Departures	Tons of Enplaned Mail	Tons of Enplaned Cargo
	Total	Domestic	International			
1984 .....	325,233,918	316,280,548	8,953,370	5,232,782	1,310,016.9	2,749,633.9
1985 .....	360,710,517	351,346,625	9,363,892	5,476,633	1,416,643.1	2,548,025.1
1986 .....	396,961,967	387,599,481	9,362,486	6,153,247	1,980,248.3	3,728,296.2
1987 .....	422,747,715	411,311,165	11,436,550	6,372,793	1,534,719.8	3,948,060.7
1988 .....	426,937,914	413,790,076	13,147,838	6,426,421	1,626,030.8	4,550,772.8
1989 .....	425,103,192	411,139,530	13,963,662	6,331,555	1,537,234.6	5,116,092.4
1990 .....	433,254,832	NA	NA	6,572,179	1,558,021.6	4,629,653.7
1991 .....	422,601,128	NA	NA	6,456,329	1,550,220.5	4,750,582.2
1992 .....	441,545,379	NA	NA	6,519,252	1,676,037.1	4,952,682.6
1993 .....	461,920,525	NA	NA	7,107,553	1,811,655.5	6,262,602.4

\* Includes operations of certificated all-cargo carriers.

Source: RSPA-FAA Airport Activity Statistics of Certificated Route Air Carriers.

**TABLE 4.4 \***  
**AMERICAN FLAG AIRLINE TRAFFIC ENPLANED—U.S. TERRITORIES**  
**LARGE SCHEDULED CERTIFICATED AIR CARRIERS**  
**SCHEDULED AND NONSCHEDULED OPERATIONS**  
**1984–1993**

Year	Enplaned Passenegers			Air Carrier Aircraft Departures	Tons of Enplaned Mail	Tons of Enplaned Cargo
	Total	Domestic	International			
1984 .....	2,537,084	1,888,024	649,060	34,196	6,746.3	69,167.6
1985 .....	2,630,980	1,940,298	690,682	29,026	6,799.9	53,001.9
1986 .....	3,046,033	2,249,694	796,339	38,960	6,856.5	62,206.8
1987 .....	4,068,330	2,940,763	1,127,567	39,690	7,389.6	66,511.0
1988 .....	4,478,219	3,081,000	1,397,219	43,435	8,143.1	75,496.4
1989 .....	4,551,410	2,974,207	1,577,203	41,978	7,693.8	83,661.0
1990 .....	5,289,169	NA	NA	69,502	8,076.5	103,072.3
1991 .....	5,718,120	NA	NA	88,671	12,770.2	103,931.0
1992 .....	6,080,609	NA	NA	87,357	6,594.5	100,995.3
1993 .....	6,392,504	NA	NA	86,288	7,547.6	121,284.8

\* Includes operations of certificated all-cargo carriers.

NA—No longer available.

Source: RSPA-FAA Airport Activity Statistics of Certificated Route Air Carriers.

**TABLE 4.5 \***  
**AMERICAN FLAG AIRLINE TRAFFIC ENPLANED—FOREIGN COUNTRIES**  
**LARGE SCHEDULED CERTIFICATED AIR CARRIERS**  
**SCHEDULED AND NONSCHEDULED OPERATIONS**  
**1984–1993**

Year	Enplaned Passenegers			Air Carrier Aircraft Departures	Tons of Enplaned Mail	Tons of Enplaned Cargo
	Total	Domestic	International			
1984 .....	17,060,716	2,967,837	14,092,879	182,563	72,391.5	760,414.6
1985 .....	17,766,621	2,816,104	14,950,517	190,558	63,477.6	814,732.7
1986 .....	18,555,577	3,418,820	15,136,757	209,392	78,068.8	928,041.1
1987 .....	22,097,681	3,618,065	18,479,616	227,917	79,624.7	1,058,693.2
1988 .....	24,610,239	3,455,139	21,155,100	254,589	83,564.8	1,233,769.8
1989 .....	25,608,464	3,531,158	22,077,306	274,919	86,387.8	1,374,037.1
1990 .....	NA	NA	NA	NA	NA	NA
1991 .....	NA	NA	NA	NA	NA	NA
1992 .....	NA	NA	NA	NA	NA	NA
1993 .....	NA	NA	NA	NA	NA	NA

\* Includes operations of certificated all-cargo carriers.

NA—No longer available.

Source: RSPA-FAA Airport Activity Statistics of Certificated Route Air Carriers.

**TABLE 4.6**  
**SUMMARY OF AIRCRAFT DEPARTURES, ENPLANED REVENUE PASSENGERS,**  
**AND ENPLANED REVENUE TONS OF CARGO AND MAIL IN TOTAL OPERATIONS,**  
**BY TYPE OF SERVICE, BY CARRIER GROUP, AND BY AIR CARRIER**  
**12 MONTHS ENDED DECEMBER 31, 1993**

Carrier Group By Air Carrier	Operation	Service	Aircraft Departures		Enplaned Passengers	Enplaned Revenue Tons	
			Total Performed	Scheduled		Freight	Mail
<b>MAJORS</b>							
AMERICA WEST .....	TOTAL .....	S	181,772	183,534	14,678,500	39,182.45	45,629.55
		NS	807		32,110		
		AS	182,579	183,534	14,710,610	39,182.45	45,629.55
AMERICAN .....	TOTAL .....	S	874,706	890,941	75,153,113	480,477.20	294,669.99
		NS	353		22,746		
		AS	875,059	890,941	75,175,859	480,477.20	294,669.99
CONTINENTAL .....	TOTAL .....	S	450,228	459,189	35,164,187	183,028.09	102,684.54
		NS	1,699		170,522		
		AS	451,927	459,189	35,334,709	183,028.09	102,684.54
DELTA .....	TOTAL .....	S	944,751	953,621	80,358,044	432,405.65	378,763.97
		NS	879		58,224		
		AS	945,630	953,621	80,416,268	432,405.65	378,763.97
FEDERAL EXPRESS .....	TOTAL .....	S	237,004	237,004		2,613,782.65	12,336.23
		NS	1,240			14,076.51	
		AS	238,244	237,004		2,627,859.16	12,336.23
NORTHWEST .....	TOTAL .....	S	510,162	519,258	39,531,482	452,003.08	210,952.85
		NS	521		60,587	486.54	
		AS	510,683	519,258	39,592,069	452,489.62	210,952.85
SOUTHWEST .....	TOTAL .....	S	506,967	513,548	37,517,255	33,977.96	27,959.70
		NS	1,023		118,843		
		AS	507,990	513,548	37,636,098	33,977.96	27,959.70
TRANS WORLD .....	TOTAL .....	S	254,890	260,683	17,914,076	92,256.24	104,238.51
		NS	949		50,715		
		AS	255,839	260,683	17,964,791	92,256.24	104,238.51
UNITED .....	TOTAL .....	S	697,317	707,416	62,902,136	418,625.08	301,966.43
		NS	1,120		125,568		
		AS	698,437	707,416	63,027,704	418,625.08	301,966.43
UNITED PARCEL .....	TOTAL .....	S	1,475	940		48,015.85	
		NS	82,210			21,284.25	
		AS	83,685	940		69,300.10	
US AIR .....	TOTAL .....	S	848,793	867,365	52,709,842	100,786.96	181,315.89
		NS	3,309		272,285	.03	1.96
		AS	852,102	867,365	52,982,127	100,786.99	181,317.85
<b>TOTAL, MAJORS</b> .....	<b>TOTAL</b> .....	<b>S</b>	<b>5,508,065</b>	<b>5,593,499</b>	<b>415,928,635</b>	<b>4,894,541.21</b>	<b>1,660,517.66</b>
		<b>NS</b>	<b>94,110</b>		<b>911,600</b>	<b>35,847.33</b>	<b>1.96</b>
		<b>AS</b>	<b>5,602,175</b>	<b>5,593,499</b>	<b>416,840,235</b>	<b>4,930,388.54</b>	<b>1,660,519.62</b>
<b>NATIONALS</b>							
AIR WISCONSIN .....	TOTAL .....	S	59,519	62,223	2,066,012	672.18	772.34
ALASKA .....	TOTAL .....	S	106,871	106,583	6,073,721	56,151.04	38,850.24
		NS	1,427		83,952	1,623.05	988.75
		AS	108,298	106,583	6,157,673	57,774.09	39,838.99
ALOHA .....	TOTAL .....	S	71,694	74,567	4,703,720	8,442.60	5,621.39
		NS	124		9,045	.50	
		AS	71,818	74,567	4,712,765	8,443.10	5,621.39
AMERICAN TRANS .....	TOTAL .....	S	9,839	9,839	1,192,068		
		NS	9,099		1,409,298		
		AS	18,938	9,839	2,601,366		
ATLANTIC SOUTHEAST .....	TOTAL .....	S	101,279	103,444	1,460,262	654.87	127.25
BUSINESS EXPRESS .....	TOTAL .....	S	160,326	171,657	1,920,118		
DHL .....	TOTAL .....	S	56,550	61,486		173,230.86	7,899.53
		NS	10			114.56	1,401.80
		AS	56,560	61,486		173,345.42	9,301.33
EMERY WORLDWIDE .....	TOTAL .....	S	37,567			31,910.33	1,795.97
EVERGREEN .....	TOTAL .....	S	230	230		450.25	
		NS	6,129		16,751	14,875.39	18,067.09
		AS	6,359	230	16,751	15,325.64	18,067.09
HAWAIIAN .....	TOTAL .....	S	54,748	54,802	4,312,939	26,196.86	4,424.57
		NS	206		13,315		
		AS	54,954	54,802	4,326,254	26,196.86	4,424.57
HORIZON AIR .....	TOTAL .....	S	189,888	196,025	2,596,494	7,202.32	2,618.32
		NS	3		48		
		AS	189,891	196,025	2,596,542	7,202.32	2,618.32
MARKAIR .....	TOTAL .....	S	26,687	25,382	1,107,234	10,707.43	20,163.02
		NS	1,069		18,008	3,954.90	
		AS	27,756	25,382	1,125,242	14,662.33	20,163.02
MIDWEST EXPRESS .....	TOTAL .....	S	24,554	24,801	952,490	4,709.06	7,876.96
		NS	580		23,882		
		AS	25,134	24,801	976,372	4,709.06	7,876.96
SOUTHERN AIR .....	TOTAL .....	S	136	136		7,349.52	
		NS	5,012			84,858.06	
		AS	5,148	136		92,207.58	
SUN COUNTRY .....	TOTAL .....	S	10,797		1,770,678		
TOWER .....	TOTAL .....	S	1,506	1,465	478,418	3,272.17	
		NS	802		175,371		
		AS	2,308	1,465	653,789	3,272.17	
USAIR SHUTTLE .....	TOTAL .....	S	21,689	22,684	1,489,614	134.29	189.95
		NS	109		12,410		
		AS	21,798	22,684	1,502,024	134.29	189.95

**TABLE 4.6—Continued**  
**SUMMARY OF AIRCRAFT DEPARTURES, ENPLANED REVENUE PASSENGERS,**  
**AND ENPLANED REVENUE TONS OF CARGO AND MAIL IN TOTAL OPERATIONS,**  
**BY TYPE OF SERVICE, BY CARRIER GROUP, AND BY AIR CARRIER**  
**12 MONTHS ENDED DECEMBER 31, 1993**

Carrier Group By Air Carrier	Operation	Service	Aircraft Departures		Enplaned Passengers	Enplaned Revenue Tons	
			Total Performed	Scheduled		Freight	Mail
WESTAIR .....	TOTAL .....	S	78,396	79,333	1,047,001		
WORLD .....	TOTAL .....	NS	1,373		154,433	7,908.67	
<b>TOTAL, NATIONALS .....</b>	<b>TOTAL .....</b>	<b>S</b>	<b>963,912</b>	<b>994,657</b>	<b>29,400,091</b>	<b>299,173.45</b>	<b>88,543.57</b>
		NS	74,307		3,687,191	145,245.46	22,253.61
		AS	1,038,219	994,657	33,087,282	444,418.91	110,797.18
<b>LARGE REGIONALS</b>							
AIR TRANSPORT .....	TOTAL .....	NS	10,058			217,298.75	
AMERICAN INTL .....	TOTAL .....	S	1,311	1,310		132.84	
		NS	11,042			54,100.95	1,649.91
		AS	12,353	1,310		54,233.79	1,649.91
AMERIJET .....	TOTAL .....	S	718	589		12,261.94	
		NS	5,499			31,006.43	147.47
		AS	6,217	589		43,268.37	147.47
ARROW .....	TOTAL .....	S	1,029	536		17,407.96	
		NS	5,352		914	121,015.62	
		AS	6,381	536	914	138,423.58	
CARNIVAL .....	TOTAL .....	S	6,779	6,689	673,064	607.61	617.39
		NS	2,403		225,153	405.99	23.12
		AS	9,182	6,689	898,217	1,013.60	640.51
CHALLENGE .....	TOTAL .....	S	1,553	1,553		35,169.95	1,191.25
		NS	2			69.34	
		AS	1,555	1,553		35,239.29	1,191.25
EXECUTIVE AIRLINES .....	TOTAL .....	S	28,134	28,766	652,971	5.59	.68
		NS	4		40		
		AS	28,138	28,766	653,011	5.59	.68
EXPRESS ONE .....	TOTAL .....	NS	15,224		1,019,278	30,427.27	
FLORIDA WEST .....	TOTAL .....	NS	582			15,944.58	
KIWI .....	TOTAL .....	S	7,295	7,323	616,930		519.34
MGM GRAND .....	TOTAL .....	NS	1,292		29,663		
MORRIS .....	TOTAL .....	S	30,612	30,754	3,161,764	222.00	1,196.81
		NS	4,106		494,699		
		AS	34,718	30,754	3,656,463	222.00	1,196.81
NORTHERN AIR .....	TOTAL .....	S	7,939	6,433		17,690.56	20,472.05
		NS	669			3,782.53	654.50
		AS	8,608	6,433		21,473.09	21,126.55
PRIVATE JET .....	TOTAL .....	S	1,848	289	120,089		
		NS	6,209		681,882		
		AS	8,057	289	801,971		
REEVE .....	TOTAL .....	S	3,210	3,223	50,718	2,307.91	3,390.56
		NS	134		4,422	101.52	98.56
		AS	3,344	3,223	55,140	2,409.43	3,489.12
RENO .....	TOTAL .....	S	26,059	26,237	1,860,633	1,007.20	2,017.99
		NS	41		5,438		
		AS	26,100	26,237	1,866,071	1,007.20	2,017.99
RICH .....	TOTAL .....	NS	1,076		241,534		
SIMMONS .....	TOTAL .....	S	192,184	199,193	4,146,877	1,398.95	1,157.52
		NS	27		753		
		AS	192,211	199,193	4,147,630	1,398.95	1,157.52
TRANS STATES .....	TOTAL .....	S	97,343	101,247	1,387,865		
UFS .....	TOTAL .....	S	4,901	5,565	142,239		
ZANTOP .....	TOTAL .....	S	2,412	2,704		23,251.67	2,235.03
		NS	2,543			5,667.41	
		AS	4,955	2,704		28,919.08	2,235.03
<b>TOTAL, LARGE REGIONALS .....</b>	<b>TOTAL .....</b>	<b>S</b>	<b>413,327</b>	<b>422,411</b>	<b>12,813,150</b>	<b>111,464.18</b>	<b>32,798.62</b>
		NS	66,263		2,703,776	479,820.39	2,573.56
		AS	479,590	422,411	15,516,926	591,284.57	35,372.18
<b>MEDIUM REGIONALS</b>							
AERIAL TRANSIT .....	TOTAL .....	NS	151			1,617.74	
AIRMARK .....	TOTAL .....	NS	735	D73,999			
ATLAS .....	TOTAL .....	NS	49			36,427.32	
AV ATLANTIC .....	TOTAL .....	NS	572		68,573		
BUFFALO .....	TOTAL .....	S				24,395.15	
		NS	3,727		3,792	55,599.86	
		AS	3,727		3,792	79,995.01	
CAPITOL AIR .....	TOTAL .....	NS	461		28,036		
CASINO EXPRESS .....	TOTAL .....	S	2,450	2,449	218,564		
		NS	16		1,382		
		AS	2,466	2,449	219,946		
CONTINENTAL MICRONES .....	TOTAL .....	S	8,907	8,932	813,106	13,064.83	5,610.83
		NS	29		4,207		
		AS	8,936	8,932	817,313	13,064.83	5,610.83
EAGLE .....	TOTAL .....	NS	1,124		45,171	1,044.53	
EMPIRE .....	TOTAL .....	S	28,123	29,632	98,603	175,152.01	
		NS	1,447		98,188		
		AS	29,570	29,632	196,791	175,152.01	
FINE AIRLINES .....	TOTAL .....	S	404	404		5,943.00	1,876.00
		NS	1,089			24,518.54	
		AS	1,493	404		30,461.54	1,876.00
GREAT AMERICAN .....	TOTAL .....	NS	2,710		119,128		
INTL CARGO XPRESS .....	TOTAL .....	NS	16		387	166.90	
MIAMI AIR .....	TOTAL .....	NS	2,341		184,400		



**TABLE 4.6—Continued**  
**SUMMARY OF AIRCRAFT DEPARTURES, ENPLANED REVENUE PASSENGERS,**  
**AND ENPLANED REVENUE TONS OF CARGO AND MAIL IN TOTAL OPERATIONS,**  
**BY TYPE OF SERVICE, BY CARRIER GROUP, AND BY AIR CARRIER**  
**12 MONTHS ENDED DECEMBER 31, 1993**

Carrier Group By Air Carrier	Operation	Service	Aircraft Departures		Enplaned Passengers	Enplaned Revenue Tons	
			Total Performed	Scheduled		Freight	Mail
MILLON .....	TOTAL .....	NS	416			13,215.84	
NORTH AMERICAN .....	TOTAL .....	NS	233		30,026		
PATRIOT .....	TOTAL .....	S				1,787.72	
		NS	819			8,737.35	
		AS	819			10,525.07	
		NS	5,428		62,187	50,850.75	5,027.29
RYAN .....	TOTAL .....	NS	3,770		345,548		
SIERRA PACIFIC .....	TOTAL .....	NS	3,021	3,114	269,104		
SPIRIT AIR .....	TOTAL .....	S	179		15,681		
		AS	3,200	3,114	284,785		
		NS	83		3,230		
TRANS AMERICAN .....	TOTAL .....	NS	557			4,869.14	
TRANS-AIR-LINK .....	TOTAL .....	S	1,577	1,615	62,491	71.17	
ULTRAIR .....	TOTAL .....	NS	359		48,794		
		AS	1,936	1,615	111,285	71.17	
		S	1,387	1,384	88,750		
VALUJET .....	TOTAL .....	NS	1,657		185,239		
WORLDWIDE .....	TOTAL .....	NS	20			333.29	
WRANGLER .....	TOTAL .....	S	45,869	47,530	1,550,618	220,413.88	7,486.83
TOTAL, MEDIUM REGIONALS .....	TOTAL .....	NS	27,988		1,317,968	197,381.26	5,027.29
		AS	73,857	47,530	2,868,586	417,795.14	12,514.12
		S	6,931,173	7,058,097	459,692,494	5,525,592.72	1,789,346.68
OVER-ALL TOTAL, ALL CARRIERS .....	TOTAL .....	NS	262,668		8,620,535	858,294.44	29,856.42
		AS	7,193,841	7,058,097	468,313,029	6,383,887.16	1,819,203.10

**TABLE 4.7**  
**SUMMARY OF AIRCRAFT DEPARTURES, ENPLANED REVENUE PASSENGERS,**  
**AND ENPLANED REVENUE TONS OF CARGO AND MAIL IN TOTAL OPERATIONS,**  
**BY TYPE OF SERVICE, AND BY STATE AND U.S. AREA**  
**12 MONTHS ENDED DECEMBER 31, 1993**

State or U.S. Area	Operation	Service	Aircraft Departures		Enplaned Passengers	Enplaned Revenue Tons	
			Total Performed	Scheduled		Freight	Mail
<b>50 U. S. STATES</b>							
ALABAMA	TOTAL	S	41,563	42,123	1,856,975	13,408.42	6,679.53
		NS	1,738		11,685	5,997.88	44.34
		AS	43,301	42,123	1,868,660	19,406.30	6,723.87
ALASKA	TOTAL	S	73,597	71,650	2,261,303	293,530.28	73,001.88
		NS	4,530		61,868	47,015.49	974.57
		AS	78,127	71,650	2,323,171	340,545.77	73,976.45
ARIZONA	TOTAL	S	165,425	166,964	12,519,789	66,927.36	31,640.03
		NS	4,870		113,680	7,535.01	1,152.28
		AS	170,295	166,964	12,633,469	74,462.37	32,792.31
ARKANSAS	TOTAL	S	31,076	31,685	1,251,454	1,324.83	5,151.39
		NS	756		9,533	516.52	696.18
		AS	31,832	31,685	1,260,987	1,841.35	5,847.57
CALIFORNIA	TOTAL	S	687,296	694,684	56,218,203	809,766.13	178,821.41
		NS	21,810		511,039	61,743.55	8,835.93
		AS	709,106	694,684	56,729,242	871,509.68	187,657.34
COLORADO	TOTAL	S	197,546	199,996	15,172,805	94,668.97	50,297.07
		NS	5,560		264,397	2,652.82	1,751.35
		AS	203,106	199,996	15,437,202	97,321.79	52,048.42
CONNECTICUT	TOTAL	S	36,536	37,361	2,224,137	15,884.41	15,885.08
		NS	2,766		16,120	9,502.81	30.86
		AS	39,302	37,361	2,240,257	25,387.22	15,915.94
DELAWARE	TOTAL	S	30	20		107.70	
		NS	445		849	8,810.57	
		AS	475	20	849	8,918.27	
DIST. OF COL	TOTAL	S	141,797	145,541	11,189,742	73,853.21	59,075.85
		NS	540		26,043	184.72	9.85
		AS	142,337	145,541	11,215,785	74,037.93	59,085.70
FLORIDA	TOTAL	S	411,531	415,077	34,192,250	320,039.97	88,822.57
		NS	23,388		1,120,742	178,248.17	106.48
		AS	434,919	415,077	35,312,992	498,288.14	88,929.05
GEORGIA	TOTAL	S	286,272	288,410	23,009,608	175,301.78	113,473.59
		NS	6,309		95,001	4,929.32	178.70
		AS	292,581	288,410	23,104,609	180,231.10	113,652.29
HAWAII	TOTAL	S	156,129	159,277	13,584,541	148,112.92	26,591.53
		NS	1,568		96,524	13,911.66	155.51
		AS	157,697	159,277	13,681,065	162,024.58	26,747.04
IDAHO	TOTAL	S	41,404	42,628	927,807	7,425.74	2,543.91
		NS	894		48,407	188.42	46.93
		AS	42,298	42,628	976,214	7,614.16	2,590.84
ILLINOIS	TOTAL	S	462,114	474,275	32,590,718	315,669.27	150,705.85
		NS	7,137		352,488	8,687.40	121.23
		AS	469,251	474,275	32,943,206	324,356.67	150,827.08
INDIANA	TOTAL	S	75,705	77,185	3,374,678	197,568.38	14,967.35
		NS	8,693		78,782	12,179.61	780.46
		AS	84,398	77,185	3,453,460	209,747.99	15,747.81
IOWA	TOTAL	S	31,057	32,105	1,088,293	16,365.13	15,522.76
		NS	3,115		22,926	4,034.95	227.56
		AS	34,172	32,105	1,111,219	20,400.08	15,750.32
KANSAS	TOTAL	S	13,547	13,752	565,958	7,560.12	2,806.81
		NS	1,268		16,561	4,405.07	265.21
		AS	14,815	13,752	582,519	11,965.19	3,072.02
KENTUCKY	TOTAL	S	32,529	32,984	1,454,126	10,446.41	7,815.73
		NS	25,325		23,578	9,896.19	
		AS	57,854	32,984	1,477,704	20,342.60	7,815.73
LOUISIANA	TOTAL	S	70,327	71,144	4,060,816	23,364.55	10,980.87
		NS	2,495		53,015	5,884.51	16.00
		AS	72,822	71,144	4,113,831	29,249.06	10,996.87
MAINE	TOTAL	S	21,207	22,208	646,142	4,607.63	1,165.38
		NS	266		10,164	102.10	
		AS	21,473	22,208	656,306	4,709.73	1,165.38
MARYLAND	TOTAL	S	59,447	60,659	3,890,561	14,245.46	20,144.26
		NS	2,936		64,407	8,966.39	41.28
		AS	62,383	60,659	3,954,968	23,211.85	20,185.54
MASSACHUSETTS	TOTAL	S	163,070	170,975	10,138,368	118,354.21	38,732.61
		NS	3,070		162,961	6,810.20	42.20
		AS	166,140	170,975	10,301,329	125,164.41	38,774.81
MICHIGAN	TOTAL	S	185,404	189,470	12,284,920	87,184.08	51,358.11
		NS	7,140		485,731	6,853.50	522.98
		AS	192,544	189,470	12,770,651	94,037.58	51,881.09
MINNESOTA	TOTAL	S	139,249	141,978	10,230,831	92,762.03	55,282.08
		NS	4,851		404,071	3,768.23	209.30
		AS	144,100	141,978	10,634,902	96,530.26	55,491.38
MISSISSIPPI	TOTAL	S	12,155	12,300	393,046	653.78	1,816.93
		NS	1,567		41,030	1,512.66	
		AS	13,722	12,300	434,076	2,166.44	1,816.93
MISSOURI	TOTAL	S	259,279	264,744	13,785,216	57,356.46	65,412.03
		NS	6,240		204,473	14,079.17	245.53
		AS	265,519	264,744	13,989,689	71,435.63	65,657.56

**TABLE 4.7—Continued**  
**SUMMARY OF AIRCRAFT DEPARTURES, ENPLANED REVENUE PASSENGERS,**  
**AND ENPLANED REVENUE TONS OF CARGO AND MAIL IN TOTAL OPERATIONS,**  
**BY TYPE OF SERVICE, AND BY STATE AND U.S. AREA**  
**12 MONTHS ENDED DECEMBER 31, 1993**

State or U.S. Area	Operation	Service	Aircraft Departures		Enplaned Passengers	Enplaned Revenue Tons	
			Total Performed	Scheduled		Freight	Mail
MONTANA .....	TOTAL .....	S	44,482	45,335	922,966	10,926.17	3,626.13
		NS	654		5,152	69.57	450.77
		AS	45,136	24,142	1,202,237	12,646.95	21,586.58
NEBRASKA .....	TOTAL .....	S	23,928	24,142	1,202,237	12,646.95	21,586.58
		NS	771		17,979	259.30	1.60
		AS	24,699	24,142	1,220,216	12,906.25	21,588.18
NEVADA .....	TOTAL .....	S	127,191	127,857	11,008,226	28,123.51	16,883.51
		NS	9,016		1,388,305	26.10	144.26
		AS	136,207	127,857	12,396,531	28,149.61	17,027.77
NEW HAMPSHIRE .....	TOTAL .....	S	19,513	20,719	319,922	7,066.47	473.94
		NS	920		1,344	177.80	
		AS	20,433	20,719	321,266	7,244.27	473.94
NEW JERSEY .....	TOTAL .....	S	138,509	143,233	10,919,824	225,454.33	48,933.64
		NS	6,481		360,052	5,008.74	385.62
		AS	144,990	143,233	11,279,876	230,463.07	49,319.26
NEW MEXICO .....	TOTAL .....	S	40,234	40,529	2,673,802	20,139.81	8,015.69
		NS	1,513		7,613	301.38	118.31
		AS	41,747	40,529	2,681,415	20,441.19	8,134.00
NEW YORK .....	TOTAL .....	S	343,695	356,162	22,667,503	288,529.47	113,572.93
		NS	10,265		399,592	33,396.50	116.57
		AS	353,960	356,162	23,067,095	321,925.97	113,689.50
NORTH CAROLINA .....	TOTAL .....	S	219,107	222,386	13,430,358	68,632.79	38,710.25
		NS	5,056		77,809	21,800.07	23.49
		AS	224,163	222,386	13,508,167	90,432.86	38,733.74
NORTH DAKOTA .....	TOTAL .....	S	12,098	12,190	467,774	4,591.59	1,891.63
		NS	96		6,196	70.14	
		AS	12,194	12,190	473,970	4,661.73	1,891.63
OHIO .....	TOTAL .....	S	207,739	215,471	12,422,015	150,633.43	56,132.30
		NS	20,515		216,200	228,611.12	2,802.90
		AS	228,254	215,471	12,638,215	379,244.55	58,935.20
OKLAHOMA .....	TOTAL .....	S	56,277	57,132	2,942,438	18,074.23	10,349.80
		NS	2,044		82,946	5,999.49	27.24
		AS	58,321	57,132	3,025,384	24,073.72	10,377.04
OREGON .....	TOTAL .....	S	117,887	120,064	4,691,342	75,572.29	14,387.90
		NS	3,847		103,509	4,857.16	1,742.89
		AS	121,734	120,064	4,794,851	80,429.45	16,130.79
PENNSYLVANIA .....	TOTAL .....	S	262,908	268,574	16,571,306	96,766.90	85,049.20
		NS	9,004		211,741	6,807.45	592.91
		AS	271,912	268,574	16,783,047	103,574.35	85,642.11
RHODE ISLAND .....	TOTAL .....	S	21,692	22,492	965,613	2,725.79	3,812.46
		NS	143		4,643	1.15	
		AS	21,835	22,492	970,256	2,726.94	3,812.46
SOUTH CAROLINA .....	TOTAL .....	S	30,615	30,865	1,726,602	8,819.70	6,287.03
		NS	2,392		21,861	18,232.11	3.77
		AS	33,007	30,865	1,748,463	27,051.81	6,290.80
SOUTH DAKOTA .....	TOTAL .....	S	11,213	11,340	352,839	9,172.34	2,438.65
		NS	379		5,511	162.68	
		AS	11,592	11,340	358,350	9,335.02	2,438.65
TENNESSEE .....	TOTAL .....	S	172,929	174,805	7,965,827	824,546.11	30,062.83
		NS	3,018		35,371	6,469.86	89.89
		AS	175,947	174,805	8,001,198	831,015.97	30,152.72
TEXAS .....	TOTAL .....	S	754,108	765,074	50,050,446	326,275.10	147,219.37
		NS	15,689		544,212	37,377.61	829.08
		AS	769,797	765,074	50,594,658	363,652.71	148,048.45
UTAH .....	TOTAL .....	S	84,735	85,500	6,832,875	49,683.85	23,022.62
		NS	5,045		314,909	3,009.77	2,816.24
		AS	89,780	85,500	7,147,784	52,693.62	25,838.86
VERMONT .....	TOTAL .....	S	7,915	8,229	273,251	2,529.34	452.69
		NS	11		568		
		AS	7,926	8,229	273,819	2,529.34	452.69
VIRGINIA .....	TOTAL .....	S	47,193	47,967	2,275,245	14,382.42	11,406.68
		NS	3,982		32,072	19,690.91	333.55
		AS	51,175	47,967	2,307,317	34,073.33	11,740.23
WASHINGTON .....	TOTAL .....	S	222,704	226,810	10,370,119	184,173.35	38,585.74
		NS	5,855		243,567	13,218.02	2,889.40
		AS	228,559	226,810	10,613,686	197,391.37	41,475.14
WEST VIRGINIA .....	TOTAL .....	S	7,526	7,669	195,749	1,417.10	152.65
		NS	82		5,592	7.58	
		AS	7,608	7,669	201,341	1,424.68	152.65
WISCONSIN .....	TOTAL .....	S	71,921	73,838	3,054,587	23,594.09	10,079.93
		NS	2,775		126,960	3,401.83	.08
		AS	74,696	73,838	3,181,547	26,995.92	10,080.01
WYOMING .....	TOTAL .....	S	6,911	6,945	170,056	4,262.74	3.48
		NS	79		2,713		
		AS	6,990	6,945	172,769	4,262.74	3.48
UTAH .....	TOTAL .....	NS	322		22,824		
<b>TOTAL FOR 50 U. S. STATES</b>	<b>TOTAL</b>	<b>S</b>	<b>6,848,322</b>	<b>6,974,523</b>	<b>453,385,209</b>	<b>5,425,229.10</b>	<b>1,781,832.24</b>
		<b>NS</b>	<b>259,231</b>		<b>8,535,316</b>	<b>837,373.26</b>	<b>29,823.30</b>
		<b>AS</b>	<b>7,107,553</b>	<b>6,974,523</b>	<b>461,920,525</b>	<b>6,262,602.36</b>	<b>1,811,655.54</b>

**TABLE 4.7—Continued**  
**SUMMARY OF AIRCRAFT DEPARTURES, ENPLANED REVENUE PASSENGERS,**  
**AND ENPLANED REVENUE TONS OF CARGO AND MAIL IN TOTAL OPERATIONS,**  
**BY TYPE OF SERVICE, AND BY STATE AND U.S. AREA**  
**12 MONTHS ENDED DECEMBER 31, 1993**

State or U.S. Area	Operation	Service	Aircraft Departures		Enplaned Passengers	Enplaned Revenue Tons	
			Total Performed	Scheduled		Freight	Mail
<b>OTHER U. S. AREAS</b>							
AMERICAN SAMOA .....	TOTAL .....	S	147	131	21,395	102.72	101.29
		NS	33			2,442.47	
		AS	180	131	21,395	2,545.19	101.29
PALAU ISLANDS .....	TOTAL .....	S	816	816	45,322	1,048.93	27.03
		NS	41		153	2,185.13	
		AS	857	816	45,475	3,234.06	27.03
GUAM .....	TOTAL .....	S	8,264	8,291	907,099	20,706.16	2,631.25
		NS	153		5,097	339.14	
		AS	8,417	8,291	912,196	21,045.30	2,631.25
JOHNSTON ISLAND .....	TOTAL .....	S	253	254	470	.21	2.68
		NS	73		5,525		
		AS	326	254	5,995	.21	2.68
MARIANA ISLANDS .....	TOTAL .....	S	4,652	4,674	353,356	5,258.20	182.02
		NS	121		776	509.87	
		AS	4,773	4,674	354,132	5,768.07	182.02
MIDWAY ISLAND .....	TOTAL .....	NS	9		287		
PUERTO RICO .....	TOTAL .....	S	53,562	53,951	4,290,465	72,522.03	4,269.97
		NS	2,730		60,418	15,179.09	33.12
		AS	56,292	53,951	4,350,883	87,701.12	4,303.09
U.S. VIRGIN ISLANDS .....	TOTAL .....	S	15,156	15,457	689,178	725.37	300.20
		NS	268		12,617	265.48	
		AS	15,424	15,457	701,795	990.85	300.20
WAKE ISLAND .....	TOTAL .....	S	1				
		NS	9		346		
		AS	10		346		
<b>TOTAL FOR OTHER U. S. AREAS .....</b>	<b>TOTAL .....</b>	<b>S</b>	<b>82,851</b>	<b>83,574</b>	<b>6,307,285</b>	<b>100,363.62</b>	<b>7,514.44</b>
		<b>NS</b>	<b>3,437</b>		<b>85,219</b>	<b>20,921.18</b>	<b>33.12</b>
		<b>AS</b>	<b>86,288</b>	<b>83,574</b>	<b>6,392,504</b>	<b>121,284.80</b>	<b>7,547.56</b>
<b>OVERALL TOTAL FOR ALL STATES, AND OTHER U.S. AREAS.</b>	<b>TOTAL .....</b>	<b>S</b>	<b>6,931,173</b>	<b>7,058,097</b>	<b>459,692,494</b>	<b>5,525,592.72</b>	<b>1,789,346.68</b>
		<b>NS</b>	<b>262,668</b>		<b>8,620,535</b>	<b>858,294.44</b>	<b>29,856.42</b>
		<b>AS</b>	<b>7,193,841</b>	<b>7,058,097</b>	<b>468,313,029</b>	<b>6,383,887.16</b>	<b>1,819,203.10</b>

**TABLE 4.8**  
**AIRCRAFT DEPARTURES, ENPLANED REVENUE PASSENGERS,**  
**AND ENPLANED REVENUE TONS OF CARGO AND MAIL IN TOTAL OPERATIONS,**  
**ALL SERVICES AT LARGE AIR TRAFFIC HUBS**  
**12 MONTHS ENDED DECEMBER 31, 1993**

Community (Airport Name)	% of Enplanements	Aircraft Departures		Enplaned Passengers	Enplaned Revenue Tons	
		Total Performed	Scheduled		Freight	Mail
<b>ATLANTA, GEORGIA</b>						
(FULTON COUNTY) .....	0.00	31	30		4.50	
(WILLIAM B HARTSFIELD INT'L) .....	4.76	272,889	269,410	22,294,571	177,681.77	113,176.87
COMMUNITY TOTAL .....	4.76	272,920	269,440	22,294,571	177,686.27	113,176.87
<b>BOSTON, MASSACHUSETTS</b>						
(LOGAN INTERNATIONAL) .....	2.18	157,959	162,595	10,202,076	124,904.70	38,774.81
<b>CHARLOTTE, NORTH CAROLINA</b>						
(DOUGLAS MUNI) .....	1.67	125,266	124,734	7,803,870	47,620.59	24,486.10
<b>CHICAGO, ILLINOIS</b>						
(DUPAGE COUNTY) .....	0.00	484	484		103.58	
(MEIGS FIELD) .....	0.00	1,018	1,207	7,139		
(MIDWAY) .....	0.64	40,898	40,636	2,978,353	3,253.37	54.37
(O'HARE INTERNATIONAL) .....	6.22	384,362	388,616	29,133,604	315,324.83	149,862.27
(PAL-WAUKEE) .....	0.00	1				
COMMUNITY TOTAL .....	6.86	426,763	430,943	32,119,096	318,681.78	149,916.64
<b>CINCINNATI, OHIO</b>						
(GREATER CINCINNATI) .....	1.09	78,361	82,505	5,127,346	96,929.69	24,804.80
(LUKEN FIELD) .....	0.00	3		29		
COMMUNITY TOTAL .....	1.09	78,364	82,505	5,127,375	96,929.69	24,804.80
<b>DALLAS/FT. WORTH, TEXAS</b>						
(ADDISON) .....	0.00	2	2		1.83	
(CARSWELL AFB) .....	0.00	1		131		
(DALLAS/FT. WORTH INTL) .....	5.26	356,770	354,599	24,655,922	191,252.55	104,000.48
(LOVE FIELD) .....	0.68	45,870	46,533	3,197,237	5,167.59	1,509.79
(MEACHAM FIELD) .....	0.00	26	1	111		
COMMUNITY TOTAL .....	5.95	402,669	401,135	27,853,401	196,421.97	105,510.27
<b>DENVER, COLORADO</b>						
(BUCKLEY ANGB) .....	0.00	2		521		
(STAPLETON INTERNATIONAL) .....	3.06	183,464	180,437	14,328,068	94,932.67	50,088.17
COMMUNITY TOTAL .....	3.06	183,466	180,437	14,328,589	94,932.67	50,088.17
<b>DETROIT, MICHIGAN</b>						
(DETROIT CITY) .....	0.05	3,229	3,262	249,928	187.23	
(WAYNE COUNTY) .....	2.35	145,579	144,836	11,027,172	68,191.22	44,925.84
(WILLOW RUN) .....	0.00	3,307	1,590	259	14,172.81	522.71
COMMUNITY TOTAL .....	2.41	152,115	149,688	11,277,359	82,551.26	45,448.55
<b>HONOLULU, OAHU, HAWAII</b>						
(HICKAM AFB) .....	0.00	147	1	3,929	646.23	
(HONOLULU INTERNATIONAL) .....	1.81	83,307	83,755	8,484,364	134,588.67	21,670.17
COMMUNITY TOTAL .....	1.81	83,454	83,756	8,488,293	135,234.90	21,670.17
<b>HOUSTON, TEXAS</b>						
(ELLINGTON FIELD) .....	0.00	1,095	158		2,907.34	
(HOUSTON INTERCONTINENTAL) .....	1.86	116,601	116,077	8,696,901	79,332.66	22,392.70
(WILLIAM P HOBBY) .....	0.87	59,729	60,747	4,061,425	4,840.79	1,208.72
COMMUNITY TOTAL .....	2.72	177,425	176,982	12,758,326	87,080.79	23,601.42
<b>LAS VEGAS, NEVADA</b>						
(MC CARRAN INTL) .....	2.16	104,489	97,114	10,108,973	12,914.39	14,024.22
(NELLIS AFB) .....	0.00	26		1,816		
COMMUNITY TOTAL .....	2.16	104,515	97,114	10,110,789	12,914.39	14,024.22
<b>LOS ANGELES/BURBNK/LNG. BCH, CAL</b>						
(EL TORO MCAS) .....	0.00	11		1,599		
(HOLLYWOOD-BURBANK) .....	0.45	26,334	26,164	2,117,643	7,142.43	2,085.64
(LONG BEACH) .....	0.06	6,029	5,782	291,131	12,759.17	710.08
(LOS ANGELES INTERNATIONAL) .....	3.94	192,145	189,588	18,456,714	374,635.56	74,562.45
(ORANGE COUNTY) .....	0.61	35,503	35,873	2,854,297	3,698.03	161.13
COMMUNITY TOTAL .....	5.07	260,022	257,407	23,721,384	398,235.19	77,519.30

**TABLE 4.8—Continued**  
**AIRCRAFT DEPARTURES, ENPLANED REVENUE PASSENGERS,**  
**AND ENPLANED REVENUE TONS OF CARGO AND MAIL IN TOTAL OPERATIONS,**  
**ALL SERVICES AT LARGE AIR TRAFFIC HUBS**  
**12 MONTHS ENDED DECEMBER 31, 1993**

Community (Airport Name)	% of Enplanements	Aircraft Departures		Enplaned Passengers	Enplaned Revenue Tons	
		Total Performed	Scheduled		Freight	Mail
<b>MIAMI/FT LAUDERDALE, FLORIDA</b>						
(FT LAUDERDALE-HOLLYWOOD INTL) .....	0.83	42,273	39,579	3,877,844	47,903.53	7,493.82
(MIAMI INTERNATIONAL) .....	2.16	119,708	111,367	10,137,030	336,634.50	26,099.93
(OPA LOCKA) .....	0.00	10	2		46.58	
COMMUNITY TOTAL .....	2.99	161,991	150,948	14,014,874	384,584.61	33,593.75
<b>MINNEAPOLIS/ST. PAUL, MINNESOTA</b>						
(MINNEAPOLIS-ST PAUL INTL) .....	2.22	136,748	134,471	10,377,577	95,954.05	55,484.33
(ST. PAUL DOWNTOWN) .....	0.00	294	294	265	27.27	
COMMUNITY TOTAL .....	2.22	137,042	134,765	10,377,842	95,981.32	55,484.33
<b>NEWARK, NEW JERSEY</b>						
(NEWARK) .....	2.34	140,542	140,586	10,965,362	229,743.49	49,318.04
<b>NEW YORK, NEW YORK</b>						
(JOHN F KENNEDY INTL) .....	1.76	82,460	80,434	8,255,844	254,834.97	60,140.74
(LA GUARDIA) .....	1.99	135,996	140,648	9,340,107	19,358.97	37,867.73
(WORLD TRADE CENTER) .....	0.00	825	1,665		138.83	
(WEST 30TH ST HELIPRT) .....	0.00	2				
(EAST 34TH STREET) .....	0.00	343	862		45.40	
COMMUNITY TOTAL .....	3.76	219,626	223,609	17,595,951	274,378.17	98,008.47
<b>ORLANDO, FLORIDA</b>						
(HERNDON) .....	0.00	1			.06	
(ORLANDO INTERNATIONAL) .....	1.86	94,823	91,166	8,714,400	49,054.90	14,863.10
COMMUNITY TOTAL .....	1.86	94,824	91,166	8,714,400	49,054.96	14,863.10
<b>PHILADELPHIA, PA/CAMDEN, NJ</b>						
(PHILADELPHIA INTL) .....	1.56	115,595	111,830	7,292,669	55,453.33	52,489.57
<b>PHOENIX, ARIZONA</b>						
(PHOENIX SKY HARBOR INTL) .....	2.41	148,478	145,671	11,294,603	62,137.05	29,769.68
<b>PITTSBURGH, PA/WHEELING W VA</b>						
(ALLEGHENY COUNTY) .....	0.00	3	3		2.34	
(GREATER PITTSBURGH) .....	1.79	131,443	131,933	8,383,674	30,980.60	27,720.74
COMMUNITY TOTAL .....	1.79	131,446	131,936	8,383,674	30,982.94	27,720.74
<b>ST. LOUIS, MISSOURI</b>						
(LAMBERT-ST LOUIS MUNI) .....	2.11	189,020	190,341	9,900,464	44,968.36	42,690.70
(SPIRIT OF ST. LOUIS) .....	0.00	19			.69	
(BI-STATE PARKS) .....	0.00	5		21		
COMMUNITY TOTAL .....	2.11	189,044	190,341	9,900,485	44,969.05	42,690.70
<b>SALT LAKE CITY, UTAH</b>						
(SALT LAKE CITY INTL) .....	1.53	89,388	85,119	7,147,123	52,595.43	25,838.86
<b>SAN DIEGO, CALIFORNIA</b>						
(GILLESPIE FIELD) .....	0.00	8			5.70	
(MONTGOMERY FIELD) .....	0.00	540	510		568.65	
(NORTH ISLAND NAS) .....	0.00	724		915	12,397.99	
(SAN DIEGO INTL-LINDBERGH) .....	1.22	68,889	68,192	5,699,382	24,046.21	8,397.86
COMMUNITY TOTAL .....	1.22	70,161	68,702	5,700,297	37,018.55	8,397.86
<b>SAN FRANCISCO/OAKLAND, CAL.</b>						
(OAKLAND METROPOLITAN INTL) .....	0.76	55,739	51,032	3,573,691	145,018.39	9,782.09
(SAN FRANCISCO INTL) .....	2.99	151,966	152,855	14,003,254	198,017.47	65,136.79
COMMUNITY TOTAL .....	3.75	207,705	203,887	17,576,945	343,035.86	74,918.88
<b>SEATTLE/TACOMA, WASHINGTON</b>						
(BOEING FIELD INTL) .....	0.00	1,032	6	1,885	1,318.08	1.76
(SEATTLE-TACOMA INTERNATIONAL) .....	1.92	143,465	141,869	9,010,385	144,685.14	37,975.79
COMMUNITY TOTAL .....	1.92	144,497	141,875	9,012,270	146,003.22	37,977.55
<b>TAMPA &amp; ST. PETERSBURG/CLWTR &amp; LKLAND, FLA</b>						
(LAKELAND MUNICIPAL) .....	0.00	1		96		
(MACDILL AFB) .....	0.00	6		516	18.67	

**TABLE 4.8—Continued**  
**AIRCRAFT DEPARTURES, ENPLANED REVENUE PASSENGERS,**  
**AND ENPLANED REVENUE TONS OF CARGO AND MAIL IN TOTAL OPERATIONS,**  
**ALL SERVICES AT LARGE AIR TRAFFIC HUBS**  
**12 MONTHS ENDED DECEMBER 31, 1993**

Community (Airport Name)	% of Enplanements	Aircraft Departures		Enplaned Passengers	Enplaned Revenue Tons	
		Total Performed	Scheduled		Freight	Mail
(ST. PETERSBURG/CLWTR INTL) .....	0.04	2,353	848	194,089	91.66	
(TAMPA INTERNATIONAL) .....	0.98	60,601	60,377	4,576,551	25,570.34	20,997.82
COMMUNITY TOTAL .....	1.02	62,961	61,225	4,771,252	25,680.67	20,997.82
<b>WASHINGTON, DIST. OF COL.</b>						
(DULLES INTERNATIONAL) .....	0.86	45,164	45,695	4,029,774	66,329.64	31,676.07
(WASHINGTON NATIONAL) .....	1.33	97,173	99,846	7,186,011	7,708.29	27,409.63
COMMUNITY TOTAL .....	2.39	142,337	145,541	11,215,785	74,037.93	59,085.70
<b>OVER-ALL TOTAL, LARGE HUBS .....</b>	<b>72.61</b>	<b>4,480,575</b>	<b>4,443,937</b>	<b>340,048,661</b>	<b>3,678,850.78</b>	<b>1,320,17637</b>

**TABLE 4.9**  
**AIRCRAFT DEPARTURES, ENPLANED REVENUE PASSENGERS,**  
**AND ENPLANED REVENUE TONS OF CARGO AND MAIL IN TOTAL OPERATIONS,**  
**ALL SERVICES AT MEDIUM AIR TRAFFIC HUBS**  
**12 MONTHS ENDED DECEMBER 31, 1993**

Community (Airport Name)	% of Enplanements	Aircraft Departures		Enplaned Pas-sengers	Enplaned Revenue Tons	
		Total Performed	Scheduled		Freight	Express
<b>ALBUQUERQUE, NEW MEXICO</b> (ALBUQUERQUE INTL) .....	0.57	39,433	38,243	2,680,077	17,785.54	8,134.00
<b>ANCHORAGE, ALASKA</b> (ANCHORAGE INTERNATIONAL) .....	0.30	36,909	33,331	1,391,119	300,915.17	60,816.03
(ELMENDORF AFB) .....	0.00	529	117	9,319	2,983.12	1.91
COMMUNITY TOTAL .....	0.30	37,438	33,448	1,400,438	303,898.29	60,817.94
<b>AUSTIN, TEXAS</b> (ROBERT MUELLER MUNI) .....	0.48	34,916	34,626	2,268,486	19,425.50	4,159.90
<b>BALTIMORE, MARYLAND</b> (BALTO/WASH INTL) .....	0.84	61,599	59,967	3,950,419	22,236.79	20,185.54
<b>BUFFALO&amp;NIAGARA FALLS, NEW YORK</b> (GREATER BUFFALO INTERNATIONAL) .....	0.31	28,936	27,823	1,463,025	7,360.38	4,584.03
(NIAGARA FALLS INTERNATIONAL) .....	0.00	4		343		
COMMUNITY TOTAL .....	0.31	28,940	27,823	1,463,368	7,360.38	4,584.03
<b>CLEVELAND, OHIO</b> (HOPKINS INTERNATIONAL) .....	0.83	64,907	63,595	3,893,989	24,501.04	13,250.75
<b>COLUMBUS, OHIO</b> (LOCKBOURNE AFB) .....	0.00	2,015	1,754	89	6,735.92	
(PORT COLUMBUS INTERNATIONAL) .....	0.51	41,008	41,007	2,383,800	7,985.11	14,961.12
COMMUNITY TOTAL .....	0.51	43,023	42,761	2,383,889	14,721.03	14,961.12
<b>EL PASO, TEXAS</b> (BIGGS AAF) .....	0.00	48		4,722	90.93	
(EL PASO INTERNATIONAL) .....	0.38	29,822	29,110	1,766,325	13,163.46	2,166.14
COMMUNITY TOTAL .....	0.38	29,870	29,110	1,771,047	13,254.39	2,166.14
<b>FORT MYERS, FLORIDA</b> (PAGE FIELD) .....	0.00	253	254		12.61	
(SOUTHWEST) .....	0.36	20,493	19,948	1,700,882	2,755.95	2,557.04
COMMUNITY TOTAL .....	0.36	20,746	20,202	1,700,882	2,768.56	2,557.04
<b>HARTFORD/SPRNGFLD/WESTFLD, CT</b> (BRADLEY INTERNATIONAL) .....	0.46	36,628	34,551	2,167,003	25,329.35	15,855.46
(RENTSCHLER) .....	0.00	33			52.75	
COMMUNITY TOTAL .....	0.46	36,661	34,551	2,167,003	25,382.10	15,855.46
<b>INDIANAPOLIS, INDIANA</b> (INDIANAPOLIS INTERNATIONAL) .....	0.58	58,409	51,329	2,712,888	204,508.70	12,966.73
<b>JACKSONVILLE, FLORIDA</b> (CECIL FIELD NAS) .....	0.00	51		4,471		
(JACKSONVILLE INTERNATIONAL) .....	0.26	19,858	18,994	1,226,313	6,724.60	8,881.76
(JACKSONVILLE NAS) .....	0.00	632		3,510	10,858.63	
(CRAIG MUNICIPAL) .....	0.00	254	255		86.98	
COMMUNITY TOTAL .....	0.26	20,795	19,249	1,234,294	17,670.21	8,881.76
<b>KAHULUI, MAUI, HAWAII</b> (KAHULUI) .....	0.51	28,362	28,634	2,391,015	11,190.79	1,968.49
<b>KANSAS CITY, MISSOURI</b> (KANSAS CITY INTL) .....	0.81	60,347	58,429	3,778,604	24,842.84	22,959.77
(KANSAS CITY MUNI) .....	0.00	610	510	300	459.96	
COMMUNITY TOTAL .....	0.81	60,957	58,939	3,778,904	25,302.80	22,959.77
<b>MEMPHIS, TENNESSEE</b> (MEMPHIS INTERNATIONAL) .....	0.69	89,988	88,549	3,238,706	806,427.37	16,592.90
(MEMPHIS NAS) .....	0.00	1		118		
COMMUNITY TOTAL .....	0.69	89,989	88,549	3,238,824	806,427.37	16,592.90



**TABLE 4.9—Continued**  
**AIRCRAFT DEPARTURES, ENPLANED REVENUE PASSENGERS,**  
**AND ENPLANED REVENUE TONS OF CARGO AND MAIL IN TOTAL OPERATIONS,**  
**ALL SERVICES AT MEDIUM AIR TRAFFIC HUBS**  
**12 MONTHS ENDED DECEMBER 31, 1993**

Community (Airport Name)	% of Enplanements	Aircraft Departures		Enplaned Passengers	Enplaned Revenue Tons	
		Total Performed	Scheduled		Freight	Express
<b>MILWAUKEE, WISCONSIN</b> (GENERAL MITCHELL FIELD) .....	0.45	41,538	39,908	2,085,185	20,788.17	8,739.75
<b>NASHVILLE, TENNESSEE</b> (METROPOLITAN) .....	0.81	65,306	65,865	3,813,856	10,087.38	11,504.57
<b>NEW ORLEANS, LOUISIANA</b> (ALVIN CALLENDAR NAS) .....	0.00	4		140		
(LAKEFRONT) .....	0.00	2		66		
(NEW ORLEANS INTL) .....	0.70	46,284	44,909	3,281,874	20,585.27	7,135.81
COMMUNITY TOTAL .....	0.70	46,290	44,909	3,282,080	20,585.27	7,135.81
<b>OKLAHOMA CITY, OKLAHOMA</b> (TINKER AFB) .....	0.00	46		449	885.24	
(WILL ROGERS WORLD) .....	0.33	27,531	26,605	1,527,590	13,224.47	5,121.02
COMMUNITY TOTAL .....	0.33	27,577	26,605	1,528,039	14,109.71	5,121.02
<b>ONTARIO/SAN BERNARD/RIVERSE, CA</b> (MARCH AFB) .....	0.00	46		5,020	102.17	
(ONTARIO INTERNATIONAL) .....	0.65	47,054	41,957	3,023,101	25,222.94	12,424.21
COMMUNITY TOTAL .....	0.65	47,100	41,957	3,028,121	25,325.11	12,424.21
<b>PORTLAND, OREGON</b> (PORTLAND INTERNATIONAL) .....	0.89	89,821	87,543	4,187,972	63,343.66	14,726.56
<b>RALEIGH/DURHAM, NORTH CAROLINA</b> (RALEIGH-DURHAM) .....	0.90	61,605	60,780	4,203,412	18,249.90	10,874.03
<b>RENO, NEVADA</b> (RENO INTL) .....	0.46	30,575	29,720	2,166,916	15,233.62	3,003.55
<b>SACRAMENTO, CALIFORNIA</b> (EXECUTIVE) .....	0.00	1		100		
(MCCLLELLAN AFB) .....	0.00	1		60		
(SACRAMENTO METROPOLITAN) .....	0.54	36,620	36,666	2,538,181	13,502.12	8,153.68
COMMUNITY TOTAL .....	0.54	36,622	36,666	2,538,341	13,502.12	8,153.68
<b>SAN ANTONIO, TEXAS</b> (KELLY AFB) .....	0.00	185		4,266	2,882.38	
(SAN ANTONIO INTERNATIONAL) .....	0.59	40,208	39,353	2,753,008	15,556.55	9,720.02
COMMUNITY TOTAL .....	0.59	40,393	39,353	2,757,274	18,438.93	9,720.02
<b>SAN JOSE, CALIFORNIA</b> (SAN JOSE MUNI) .....	0.68	44,628	44,039	3,184,121	27,191.39	5,004.66
<b>SAN JUAN, PUERTO RICO</b> (ISLA GRANDE) .....	0.00	2			.14	
(LUIS MUNOZ MARIN INTL) .....	0.89	50,804	48,793	4,149,778	78,019.88	4,303.09
COMMUNITY TOTAL .....	0.89	50,806	48,793	4,149,778	78,020.02	4,303.09
<b>TUCSON, ARIZONA</b> (DAVIS MONTHAN AFB) .....	0.00	6		468	20.51	
(TUCSON INTL) .....	0.27	17,595	17,694	1,253,636	3,475.55	3,022.63
COMMUNITY TOTAL .....	0.27	17,601	17,694	1,254,104	3,496.06	3,022.63
<b>TULSA, OKLAHOMA</b> (TULSA INTL) .....	0.31	27,173	26,865	1,444,083	9,765.43	5,231.60
<b>WEST PALM BEACH/PALM BEACH, FLA</b> (PALM BEACH INTERNATIONAL) .....	0.51	27,242	26,593	2,374,108	3,294.94	5,434.22
<b>OVER-ALL TOTAL, MEDIUM HUBS</b> .....	16.88	1,310,322	1,268,316	79,032,913	1,857,865.20	324,440.97

**TABLE 4.10**  
**AIRCRAFT DEPARTURES, ENPLANED REVENUE PASSENGERS,**  
**AND ENPLANED REVENUE TONS OF CARGO AND MAIL IN TOTAL OPERATIONS,**  
**ALL SERVICES AT SMALL AIR TRAFFIC HUBS**  
**12 MONTHS ENDED DECEMBER 31, 1993**

Community (Airport Name)	% of Enplanements	Aircraft Departures		Enplaned Pas-sengers	Enplaned Revenue Tons	
		Total Performed	Scheduled		Freight	Mail
<b>ALBANY, NEW YORK</b> (ALBANY COUNTY) .....	0.18	23,148	23,186	843,224	2,848.86	3,130.04
<b>ALLENTOWN/BETHLEHEM/EASTON, PA</b> (ALLENTOWN-BETHLEHEM-EASTON) .....	0.07	7,078	7,187	325,261	5,096.73	2,063.55
<b>AMARILLO/BORGER, TEXAS</b> (AMARILLO AIR TERMINAL) .....	0.09	6,454	6,466	423,600	264.02	681.81
<b>ATLANTIC CITY, NEW JERSEY</b> (NAFEC ATLANTIC CITY/POMONA) .....	0.07	3,900	2,189	311,441	10.07	1.22
<b>BATON ROUGE, LOUISIANA</b> (RYAN) .....	0.08	6,989	7,008	354,648	503.60	2,175.83
<b>BILLINGS, MONTANA</b> (LOGAN FIELD) .....	0.06	9,848	9,384	285,139	721.30	2,344.82
<b>BIRMINGHAM, ALABAMA</b> (BIRMINGHAM MUNI) .....	0.21	19,233	18,923	992,333	6,701.97	5,882.99
<b>BOISE, IDAHO</b> (BOISE AIR TERMINAL/GOWEN FLD) .....	0.16	20,935	20,551	752,046	4,980.16	2,428.45
<b>BROWNSVILLE/HRLGN/SAN BNTD, TEX</b> (HARLINGEN INDUSTRIAL AIRPARK) .....	0.11	7,867	7,930	521,062	6,134.86	3.50
(SOUTH PADRE ISLAND INTL) .....	0.00	811	227	10,135	5,215.73	.25
COMMUNITY TOTAL .....	0.11	8,678	8,157	531,197	11,350.59	3.75
<b>BURLINGTON, VERMONT</b> (BURLINGTON INTERNATIONAL) .....	0.06	7,663	7,966	273,819	2,345.63	452.69
<b>CEDAR RAPIDS/IOWA CITY, IOWA</b> (CEDAR RAPIDS MUNI) .....	0.08	10,717	10,403	352,456	12,930.20	3,970.08
<b>CHARLESTON, SOUTH CAROLINA</b> (CHARLESTON AFB/MUNI) .....	0.14	10,768	9,859	632,872	16,338.45	1,285.21
<b>CHARLOTTE AMALIE, ST. THOMAS, VI</b> (HARRY S. TRUMAN) .....	0.11	9,595	9,655	517,757	480.53	283.15
<b>CHATTANOOGA, TENNESSEE</b> (LOVELL FIELD) .....	0.05	4,710	4,751	234,834	1,595.25	23.57
<b>COLORADO SPRINGS, COLORADO</b> (PETERSON FIELD) .....	0.16	12,122	12,271	732,422	1,241.59	1,733.38
<b>COLUMBIA, SOUTH CAROLINA</b> (COLUMBIA METROPOLITAN) .....	0.09	8,984	8,126	420,075	6,628.95	2,330.83
<b>CORPUS CHRISTI, TEXAS</b> (CORPUS CHRISTI INTERNATIONAL) .....	0.10	8,199	8,304	454,325	313.42	592.50
(CORPUS CHRISTI NAS) .....	0.00	1		94		
COMMUNITY TOTAL .....	0.10	8,200	8,304	454,419	313.42	592.50
<b>DAYTON, OHIO</b> (JAMES M COX/DAYTON INTL) .....	0.19	27,133	17,307	868,356	121,538.02	5,724.21
(WRIGHT-PATTERSON AFB) .....	0.00	5		155	16.98	
COMMUNITY TOTAL .....	0.19	27,138	17,307	868,511	121,555.00	5,724.21
<b>DAYTONA BEACH, FLORIDA</b> (DAYTONA BEACH REGIONAL) .....	0.08	5,417	5,456	384,516	400.86	4.50

**TABLE 4.10—Continued**  
**AIRCRAFT DEPARTURES, ENPLANED REVENUE PASSENGERS,**  
**AND ENPLANED REVENUE TONS OF CARGO AND MAIL IN TOTAL OPERATIONS,**  
**ALL SERVICES AT SMALL AIR TRAFFIC HUBS**  
**12 MONTHS ENDED DECEMBER 31, 1993**

Community (Airport Name)	% of Enplanements	Aircraft Departures		Enplaned Pas- sengers	Enplaned Revenue Tons	
		Total Performed	Scheduled		Freight	Mail
<b>DES MOINES, IOWA</b> (DES MOINES MUNI) .....	0.13	13,068	10,874	627,445	7,254.43	11,773.38
<b>EUGENE, OREGON</b> (MAHLON SWEET FIELD) .....	0.08	10,950	11,077	354,495	3,818.30	813.73
<b>FAIRBANKS, ALASKA</b> (EIELSON AFB) .....	0.00	18		1,112	8.59	
(FAIRBANKS INTERNATIONAL) .....	0.06	6,889	6,792	267,255	7,102.28	8,033.31
(FORT WAINWRIGHT) .....	0.00	2		22	13.00	
COMMUNITY TOTAL .....	0.06	6,909	6,792	268,389	7,123.87	8,033.31
<b>FORT WAYNE, INDIANA</b> (MUNICIPAL/BAER FIELD) .....	0.05	7,907	7,738	250,321	1,815.91	1,268.44
<b>FRESNO, CALIFORNIA</b> (FRESNO AIR TERMINAL) .....	0.06	9,666	9,721	290,255	1,301.68	1,137.51
<b>GRAND RAPIDS, MICHIGAN</b> (KENT COUNTY) .....	0.14	13,060	12,830	649,207	7,604.04	4,453.80
<b>GREEN BAY/CLINTONVILLE, WIS.</b> (AUSTIN-STRAUBEL FIELD) .....	0.06	8,425	8,688	258,138	152.71	47.03
<b>GREENSBORO/HIGH PT/WINSTN, N.C.</b> (GREENSBORO-HIGH PT-WINSTN REG.) .....	0.20	21,862	21,544	945,617	22,499.64	3,343.61
(SMITH-REYNOLDS) .....	0.00	5		279		
COMMUNITY TOTAL .....	0.20	21,867	21,544	945,896	22,499.64	3,343.61
<b>GREENVILLE/SPARTANBURG, SC</b> (GREENVILLE/SPARTANBURG) .....	0.10	8,318	7,920	476,561	3,690.39	2,674.73
<b>GUAM, GUAM</b> (AGANA FIELD) .....	0.19	8,361	8,291	912,196	20,917.52	2,631.25
(ANDERSON AFB) .....	0.00	56		127.78		
COMMUNITY TOTAL .....	0.19	8,417	8,291	912,196	21,045.30	2,631.25
<b>HARRISBURG/YORK, PA.</b> (HARRISBURG INTERNATIONAL) .....	0.11	11,083	10,934	517,900	8,857.00	3,177.00
<b>HILO, HAWAII, HAWAII</b> (GENERAL LYMAN FIELD) .....	0.14	11,239	11,857	671,929	5,119.20	1,091.48
<b>HUNTSVILLE, ALABAMA</b> (MADISON COUNTY) .....	0.08	9,447	8,780	394,940	6,686.92	586.69
<b>INDIO/PALM SPRINGS, CALIFORNIA</b> (PALM SPRINGS MUNI) .....	0.06	4,748	4,683	274,724	97.69	2.29
<b>ISLIP, LONG ISLAND, NEW YORK</b> (LONG ISLAND-MACARTHUR) .....	0.09	8,745	9,180	423,483	157.71	829.69
<b>JACKSON-VICKSBURG, MISS.</b> (ALLEN C THOMPSON FIELD) .....	0.07	9,616	8,480	349,637	1,882.83	1,815.77
(HAWKINS FIELD) .....	0.00	1			.20	
COMMUNITY TOTAL .....	0.07	9,617	8,480	349,637	1,883.03	1,815.77
<b>KAILUA-KONA, HAWAII, HAWAII</b> (KE-AHOLE) .....	0.23	15,086	14,545	1,089,510	9,095.16	1,086.23
<b>KNOXVILLE, TENNESSEE</b> (MC GHEE TYSON) .....	0.12	11,429	11,159	561,443	12,586.28	1,468.72

**TABLE 4.10—Continued**  
**AIRCRAFT DEPARTURES, ENPLANED REVENUE PASSENGERS,**  
**AND ENPLANED REVENUE TONS OF CARGO AND MAIL IN TOTAL OPERATIONS,**  
**ALL SERVICES AT SMALL AIR TRAFFIC HUBS**  
**12 MONTHS ENDED DECEMBER 31, 1993**

Community (Airport Name)	% of Enplanements	Aircraft Departures		Enplaned Pas- sengers	Enplaned Revenue Tons	
		Total Performed	Scheduled		Freight	Mail
<b>LEXINGTON/FRANKFORT, KENTUCKY</b> (BLUE GRASS) .....	0.07	9,297	9,284	341,677	392.51	1,175.68
<b>LIHUE, KAUAI, HAWAII</b> (LIHUE) .....	0.19	12,811	13,827	866,651	844.45	821.25
<b>LITTLE ROCK, ARKANSAS</b> (ADAMS FIELD) .....	0.23	18,786	18,673	1,057,956	1,365.30	4,493.02
<b>LOUISVILLE, KENTUCKY</b> (STANDIFORD FIELD) .....	0.24	46,581	21,765	1,117,049	19,318.82	6,640.05
<b>LUBBOCK, TEXAS</b> (LUBBOCK INTL) .....	0.13	11,307	11,413	588,130	7,703.67	455.48
<b>MADISON, WISCONSIN</b> (TRUAX FIELD) .....	0.11	12,042	12,336	529,283	2,807.81	1,258.64
<b>MANCHESTER/CONCORD, N. HAMPSHIRE</b> (MUNICIPAL) .....	0.06	11,971	11,576	270,760	7,241.04	473.94
<b>MELBOURNE, FLORIDA</b> (CAPE KENNEDY REGIONAL) .....	0.06	4,412	4,442	283,008	299.94	51.10
<b>MIDLAND/ODESSA, TEXAS</b> (MIDLAND/ODESSA REGL) .....	0.11	10,063	10,135	533,093	695.30	400.17
<b>MISSION/MCALLEN/EDINBURG, TEXAS</b> (MILLER INTERNATIONAL) .....	0.05	3,476	3,507	249,789	726.03	722.64
<b>MOBILE, AL/PASCAGOULA, MISS</b> (BATES FIELD) .....	0.06	8,954	8,787	304,161	5,329.92	246.57
(MOB AEROSPACE) .....	0.00	9	2		2.51	
COMMUNITY TOTAL .....	0.06	8,963	8,789	304,161	5,332.43	246.57
<b>MOLINE, ILLINOIS</b> (QUAD-CITY) .....	0.06	9,114	9,410	260,216	151.60	812.46
<b>NEWBURGH, NEW YORK</b> (STEWART) .....	0.07	5,590	4,907	317,428	7,817.53	683.87
<b>NORFLK/VA BCH/PTSMH/CHESPE, VA</b> (CHAMBERS NAS) .....	0.00	1,017	2	15,122	11,646.93	
(NORFOLK REGIONAL) .....	0.24	21,190	21,324	1,142,714	5,273.41	6,143.15
COMMUNITY TOTAL .....	0.25	22,207	21,326	1,157,836	16,920.34	6,143.15
<b>OMAHA, NEBRASKA</b> (EPPLEY AIRFIELD) .....	0.22	19,057	18,504	1,024,619	12,251.01	19,318.28
<b>PENSACOLA, FLORIDA</b> (PENSACOLA NAS) .....	0.00	482		188	9,024.99	
(PENSACOLA REGIONAL) .....	0.07	7,404	7,455	338,733	1,032.02	1,083.91
COMMUNITY TOTAL .....	0.07	7,886	7,455	338,921	10,057.01	1,083.91
<b>PORTLAND, MAINE</b> (PORTLAND INTERNATIONAL JETPORT) .....	0.10	13,229	13,891	472,996	3,233.22	951.28
<b>PROVIDENCE, RHODE ISLAND</b> (THEODORE FRANCIS GREEN STATE) .....	0.21	21,834	22,492	970,186	2,726.94	3,812.46
<b>RICHMOND, VIRGINIA</b> (RICHARD E BYRD FLYING FIELD) .....	0.20	20,974	19,658	928,769	14,037.35	4,790.76

**TABLE 4.10—Continued**  
**AIRCRAFT DEPARTURES, ENPLANED REVENUE PASSENGERS,**  
**AND ENPLANED REVENUE TONS OF CARGO AND MAIL IN TOTAL OPERATIONS,**  
**ALL SERVICES AT SMALL AIR TRAFFIC HUBS**  
**12 MONTHS ENDED DECEMBER 31, 1993**

Community (Airport Name)	% of Enplanements	Aircraft Departures		Enplaned Pas-sengers	Enplaned Revenue Tons	
		Total Performed	Scheduled		Freight	Mail
ROCHESTER, NEW YORK (ROCHESTER-MONROE COUNTY) .....	0.22	26,310	25,704	1,007,944	16,024.82	2,367.55
SAIPAN, MARIANA ISLANDS (SAIPAN INTERNATIONAL) .....	0.08	4,771	4,674	354,047	5,768.07	182.02
SARASOTA/BRADENTON, FLORIDA (SARASOTA-BRADENTON) .....	0.17	10,820	10,866	805,613	564.80	11.25
SAVANNAH, GEORGIA (HUNTER AAF) .....	0.00	80		15,628	80.00	
(SAVANNAH INTL) .....	0.10	7,760	7,754	448,225	1,787.51	466.55
COMMUNITY TOTAL .....	0.10	7,840	7,754	463,853	1,867.51	466.55
SIOUX FALLS, SOUTH DAKOTA (JOE FOSS FIELD) .....	0.05	7,338	7,189	241,444	3,913.76	2,038.89
SOUTH BEND, INDIANA (MICHIANA REGIONAL) .....	0.07	10,352	10,602	345,969	2,550.33	975.33
SPOKANE, WASHINGTON (FAIRCHILD AFB) .....	0.00	13		371	22.29	
(FELTS FIELD) .....	0.00	250	254		87.05	
(SPOKANE INTERNATIONAL) .....	0.24	36,127	35,905	1,139,489	27,997.60	2,995.71
COMMUNITY TOTAL .....	0.24	36,390	36,159	1,139,860	28,106.94	2,995.71
SPRINGFIELD, MISSOURI (SPRINGFIELD REGIONAL) .....	0.05	8,924	8,609	245,540	1,115.89	7.09
SYRACUSE, NEW YORK (CLARENCE E HANCOCK) .....	0.19	26,867	26,372	902,503	11,742.12	4,083.74
TALLAHASSEE, FLORIDA (TALLAHASSEE MUNI) .....	0.07	7,309	7,389	320,086	1,782.23	809.44
WHITE PLAINS, NEW YORK (WESTCHESTER COUNTY) .....	0.07	9,323	9,921	322,869	7.71	.42
WICHITA, KANSAS (MC CONNELL AFB) .....	0.00	6		110	106.77	
(MID-CONTINENT) .....	0.12	14,277	13,408	565,551	11,628.98	3,072.02
COMMUNITY TOTAL .....	0.12	14,283	13,408	565,661	11,735.75	3,072.02
OVER-ALL TOTAL, SMALL HUBS .....	7.97	841,685	794,279	37,334,956	516,198.67	152,691.96

**TABLE 4.11**  
**TOP 100 AIRPORTS**  
**IN RANK ORDER BY TOTAL ENPLANED PASSENGERS**  
**LARGE SCHEDULED CERTIFICATED AIR CARRIERS**  
**SCHEDULED AND NON SCHEDULED OPERATIONS**  
**1993**

Rank	Airport	Total Enplaned Passengers	Rank	Airport	Total Enplaned Passengers
1	Chicago (O'Hare), IL .....	29,133,604	51	Kuhului, Maui, HI .....	2,391,015
2	Dallas/Ft. worth (Regional), TX .....	24,655,922	52	Columbus, OH .....	2,383,800
3	Atlanta, GA .....	22,294,571	53	West Palm Beach, FL .....	2,374,108
4	Los Angeles, CA .....	18,456,714	54	Austin, TX .....	2,268,486
5	Denver, CO .....	14,328,068	55	Hartford, CT .....	2,167,003
6	San Francisco, CA .....	14,003,254	56	Reno, NV .....	2,166,916
7	Phoenix, AZ .....	11,294,603	57	Burbank, CA .....	2,117,643
8	Detroit, MI .....	11,027,172	58	Milwaukee, WI .....	2,085,185
9	Newark, NJ .....	10,965,362	59	El Paso, TX .....	1,766,325
10	Minneapolis/St. Paul, MN .....	10,377,577	60	Ft. Myers, FL .....	1,700,882
11	Boston, MA .....	10,202,076	61	Oklahoma City, OK .....	1,527,590
12	Miami, FL .....	10,137,030	62	Buffalo, NY .....	1,463,025
13	Las Vegas, NV .....	10,108,973	63	Tulsa, OK .....	1,444,083
14	St. Louis, MO .....	9,900,464	64	Anchorage, AK .....	1,391,119
15	New York (La Guardia), NY .....	9,340,107	65	Tucson, AZ .....	1,253,636
16	Seattle-Tacoma, WA .....	9,010,385	66	Jacksonville, FL .....	1,226,313
17	Orlando, FL .....	8,714,400	67	Norfolk, VA .....	1,142,714
18	Houston (Intercontinental), TX .....	8,696,901	68	Spokane, WA .....	1,139,489
19	Honolulu, HI .....	8,484,364	69	Louisville, KY .....	1,117,049
20	Pittsburgh, PA .....	8,383,674	70	Kailua-Kona, Hawaii, HI .....	1,089,510
21	New York (John F. Kennedy), NY .....	8,255,844	71	Little rock, AR .....	1,057,956
22	Charlotte, NC .....	7,803,870	72	Omaha, NE .....	1,024,619
23	Philadelphia, PA .....	7,292,669	73	Rochester, NY .....	1,007,944
24	Washington (National), DC .....	7,186,011	74	Birmingham, AL .....	992,333
25	Salt Lake City, UT .....	7,147,123	75	Providence, RI .....	970,186
26	San Diego, CA .....	5,699,382	76	Greensboro, NC .....	945,617
27	Cincinnati, OH .....	5,127,346	77	Richmond, VA .....	928,769
28	Tampa, FL .....	4,576,551	78	Guam .....	912,196
29	Raleigh/Durham, NC .....	4,203,412	79	Syracuse, NY .....	902,503
30	Portland, OR .....	4,187,972	80	Dayton, OH .....	868,356
31	San Juan, PR .....	4,149,778	81	Lihue, Kauai, HI .....	866,651
32	Houston (William P. Hobby), TX .....	4,061,425	82	Albany, NY .....	843,224
33	Washington (Dulles Int'l), DC .....	4,029,774	83	Sarasota, FL .....	805,613
34	Baltimore, MD .....	3,950,419	84	Boise, ID .....	752,046
35	Cleveland, OH .....	3,893,989	85	Colorado Springs, CO .....	732,422
36	Ft. Lauderdale, FL .....	3,877,844	86	Hilo, HI .....	671,929
37	Nashville, TN .....	3,813,856	87	Grand Rapids, MI .....	649,207
38	Kansas City, MO .....	3,778,604	88	Charleston, SC .....	632,872
39	Oakland, CA .....	3,573,691	89	Des Moines, IA .....	627,445
40	New Orleans, LA .....	3,281,874	90	Lubbock, TX .....	588,130
41	Memphis, TN .....	3,238,706	91	Wichita, KS .....	565,551
42	Dallas (Love Field), TX .....	3,197,237	92	Knoxville, TN .....	561,443
43	San Jose, CA .....	3,184,121	93	Midland, TX .....	533,093
44	Ontario, CA .....	3,023,101	94	Madison, WI .....	529,283
45	Chicago (Midway), IL .....	2,978,353	95	Brownsville, TX .....	521,062
46	Orange County, CA .....	2,854,297	96	Harrisburg, PA .....	517,900
47	San Antonio, TX .....	2,753,008	97	Charlotte Amalie, St. Thomas, VI .....	517,757
48	Indianapolis, IN .....	2,712,888	98	Greenville, Spartanburg, SC .....	476,561
49	Albuquerque, NM .....	2,680,077	99	Portland, ME .....	472,996
50	Sacramento, CA .....	2,538,181	100	Corpus Christi Int'l., TX .....	454,325

## **V. U.S. CIVIL AIR CARRIER FLEET**

The U.S. air carrier fleet data shown in this chapter were developed from reports collected by the FAA field offices from the carriers detailing the number of aircraft by type and the associated used in air carrier service.

The aircraft reported in this chapter are all aircraft carrying passengers or cargo for compensation or hire under 14 CFR 121 (large aircraft--more than 30 seats) and 14 CFR 135 (small aircraft--30 seats or less). This definition is more encompassing than that used in Chapter 6. It is also different from the definition used in the FAA Aviation Forecast--jet aircraft of 60 seats or more, carrying passengers or cargo for compensation or hire.

**TABLE 5.1**  
**TOTAL AIRCRAFT REPORTED IN OPERATION**  
**BY AIR CARRIERS BY TYPE OF AIRCRAFT**  
**1984-1993**

Year	Total	Fixed-Wing					Total Rotary-Wing
		Total Fixed-Wing	Turbine			Piston	
			Total	Turbojet	Turboprop		
1984	4,371	4,359	3,916	2,960	956	443	12
1985	4,678	4,673	4,240	3,164	1,076	433	5
1986	4,909	4,907	4,487	3,283	1,204	420	2
1987	5,250	5,237	4,816	3,575	1,241	421	13
1988	5,660	5,652	5,290	3,915	1,375	362	8
1989	5,778	5,771	5,418	3,942	1,476	353	7
1990	6,083	6,072	5,743	4,148	1,595	329	11
1991	6,054	6,048	5,765	4,167	1,598	283	6
1992	7,320	7,187	6,340	4,446	1,894	847	133
1993 <sup>1</sup>	7,297	7,173	6,452 <sup>1</sup>	4,584	1,868	721	124

Note: Air carrier aircraft are aircraft carrying passengers or cargo for hire under 14 CFR 121 (large aircraft-more than 30 seats) and 14 CFR 135 (small Aircraft-30 seats or less). This definition is more encompassing than that used in the FAA Aviation Forecast-jet aircraft, 60 seats or more carrying passengers or cargo for hire.

Note: Beginning in 1987, the number of aircraft is the monthly average of the number of aircraft reported in use for the last three months of the year. Prior to 1987, it was the number of aircraft reported in use during December of the year.

Source: 1983 - 1991 Air Carrier Aircraft Utilization and Propulsion Reliability Report; Aviation Aviation Standards National Field Office, Federal Aviation Administration. Beginning in 1992 the source is the Vital Information System.

<sup>1</sup> Does not include the aircraft listed below that are operated by the On-demand Air Taxis:

1993: Piston multiengine	2,669
Piston single engine	3,043
Turboprop single engine	321
Turboprop-multiengine	1,662
Turbojet	1,020
Helicopter	1,977
Total	10,692



**TABLE 5.2**  
**AIRCRAFT REPORTED IN OPERATION**  
**BY AIR CARRIERS, BY MANUFACTURER AND MODEL**  
**1984-1993**

Aircraft Make and Model	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984
<b>Total</b> .....	<b>7,297</b>	<b>7,320</b>	<b>6,054</b>	<b>6,083</b>	<b>5,778</b>	<b>5,660</b>	<b>5,250</b>	<b>4,909</b>	<b>4,678</b>	<b>4,370</b>
<b>Turbojet-4-engine—Total</b> .....	<b>410</b>	<b>389</b>	<b>410</b>	<b>432</b>	<b>428</b>	<b>427</b>	<b>382</b>	<b>322</b>	<b>322</b>	<b>349</b>
Boeing B707 .....	13	20	27	25	27	31	31	35	27	22
Boeing B747 .....	183	178	184	190	180	171	156	150	151	156
British Aerospace Aircraft Group BAE146 .....	20	23	17	44	53	57	57	25	29	14
Douglas DC8 .....	194	168	182	173	168	168	138	112	115	157
<b>Turbojet-3-engine—Total</b> .....	<b>1,292</b>	<b>1,381</b>	<b>1,376</b>	<b>1,438</b>	<b>1,459</b>	<b>1,542</b>	<b>1,469</b>	<b>1,466</b>	<b>1,488</b>	<b>1,438</b>
Boeing B727 .....	953	1,029	1,073	1,152	1,167	1,246	1,168	1,172	1,195	1,161
Douglas DC10/MD-11 .....	239	239	203	185	185	184	185	180	179	174
Lockheed L1011 .....	100	113	100	101	107	112	116	114	114	103
<b>Turbojet-2-engine—Total</b> .....	<b>2,882</b>	<b>2,676</b>	<b>2,381</b>	<b>2,278</b>	<b>2,055</b>	<b>1,946</b>	<b>1,724</b>	<b>1,495</b>	<b>1,354</b>	<b>1,172</b>
Airbus A300 .....	58	58	63	67	63	57	52	52	46	38
Airbus A310 .....	27	21	42	21	19	19	13	7	4	—
Airbus A320 .....	75	54	35	10	11	—	—	—	—	—
Boeing B737 .....	1,013	915	835	812	756	706	633	555	476	391
Boeing B757 .....	375	328	234	199	146	122	95	73	48	19
Boeing B767 .....	187	170	136	120	111	126	83	69	59	53
British Aircraft BAC111 .....	—	—	1	3	—	30	39	45	32	33
Canadair CL-600 .....	5	—	—	—	—	—	—	—	—	—
Cessna C500/C501 .....	3	2	—	0	—	—	—	—	2	1
Cessna C550 .....	—	—	—	7	5	—	—	—	—	—
Cessna C650 .....	—	1	—	—	—	—	—	—	—	—
Dassault Falcon .....	—	—	2	—	—	—	—	—	—	—
Dassault MD10 .....	—	—	—	—	—	—	—	—	—	2
Dassault MD20 .....	—	—	—	—	—	—	—	—	2	9
Douglas DC9/MD-80 .....	1,009	1,002	953	967	888	837	760	643	641	594
Fokker F28 .....	129	117	75	68	53	47	47	50	41	23
Grumman G1159 .....	—	1	3	1	—	—	—	—	—	—
Israel Aircraft 1121 .....	—	1	—	—	—	—	—	—	—	—
Learjet LR25 .....	—	3	2	1	2	1	—	—	—	—
Learjet LR35 .....	1	3	—	2	1	1	2	1	3	8
<b>Turboprop-4-engine—Total</b> .....	<b>102</b>	<b>107</b>	<b>75</b>	<b>88</b>	<b>96</b>	<b>95</b>	<b>102</b>	<b>96</b>	<b>108</b>	<b>109</b>
Canadair CL44 .....	1	5	—	5	5	6	6	2	6	5
DeHavilland DHC7 .....	38	40	33	40	41	39	41	40	42	46
Lockheed L188 .....	45	44	24	24	30	30	34	33	38	34
Lockheed L382 .....	18	18	18	19	20	20	21	21	22	22
Vickers V745 .....	—	—	—	—	—	—	—	—	—	2
<b>Turboprop-2-engine—Total</b> .....	<b>1,751</b>	<b>1,787</b>	<b>1,523</b>	<b>1,507</b>	<b>1,380</b>	<b>1,280</b>	<b>1,139</b>	<b>1,108</b>	<b>965</b>	<b>847</b>
Beech BE65 .....	—	16	—	—	—	1	4	1	—	—
Beech BE90 .....	3	1	—	—	—	1	4	—	3	2
Beech BE99 .....	29	39	32	54	53	84	52	95	103	85
Beech BE100 .....	1	4	1	2	1	1	—	1	1	2
Beech BE200 .....	9	11	8	16	10	7	5	2	1	6
Beech BE1900 .....	251	231	167	147	109	80	48	60	42	17
Beech STC18 .....	—	—	—	—	—	—	—	—	—	1
British Aerospace Aircraft Group Jetstream .....	247	240	214	222	165	135	113	69	46	10
British Aerospace BA ATP .....	9	10	10	4	—	—	—	—	—	—
Cessna C425 .....	2	1	—	—	—	—	—	—	—	—
Cessna C441 .....	—	2	2	2	4	3	2	3	1	3
Construcciones Aeronauticas CA212 .....	1	—	13	16	16	18	16	19	24	27
Convair CV580/CV640/CV600 .....	16	19	37	33	58	72	77	91	100	107
DeHavilland DHC6 .....	67	74	69	67	69	63	71	68	86	107
DeHavilland DHC8 .....	120	115	81	74	64	44	34	26	10	—
Dornier DO228 .....	13	13	31	32	34	33	18	12	6	—
Douglas DC3 .....	—	—	—	—	—	—	—	—	1	—
Embraer EM110 .....	14	16	23	48	59	77	97	91	79	81
Embraer EM120 .....	217	195	167	156	105	62	36	16	—	—
Fairchild FH27 .....	1	2	7	9	7	7	13	20	28	23

**TABLE 5.2—Continued**  
**AIRCRAFT REPORTED IN OPERATION**  
**BY AIR CARRIERS, BY MANUFACTURER AND MODEL**  
**1984-1993**

Aircraft Make and Model	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984
Fairchild FH227 .....	—	—	3	3	4	11	8	7	8	9
Fokker F27 .....	49	51	40	46	42	33	26	36	27	14
Grumman G73 .....	—	5	4	7	5	7	—	—	—	—
Grumman G159 .....	—	1	2	7	6	5	14	15	23	21
Grumman G500 .....	—	—	—	—	—	1	—	—	—	—
Hawker-Siddeley HS748 .....	—	—	—	—	—	—	—	—	—	2
McKinnon G-21 .....	2	—	—	—	—	—	—	—	—	—
Mitsubishi MU2 .....	—	10	1	1	—	—	1	6	3	1
Nihon YS11 .....	25	31	22	21	21	22	36	36	42	30
Nord ND262 .....	—	1	—	1	2	9	12	15	14	14
Piper 31T .....	79	99	8	8	12	9	6	5	4	8
Piper 42 .....	—	1	1	—	—	—	—	—	—	—
Rockwell AC690 .....	—	—	—	—	—	1	1	4	4	4
Saab-Fairchild SF340 .....	209	195	153	109	85	68	51	34	17	3
Short SC7 .....	6	6	2	2	—	—	—	1	1	1
Short SD3 .....	74	88	93	103	118	110	110	110	77	78
S.N.I.A.S. ATR42 .....	108	108	101	77	62	35	20	8	—	—
S.N.I.A.S. ATR72 .....	27	14	—	—	—	—	—	—	—	—
Swearingen SA226 .....	14	14	31	22	57	90	101	122	113	121
Swearingen SA227 .....	158	174	200	218	212	191	163	135	101	70
<b>Turboprop-1-engine—Total</b> .....	<b>15</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
<b>Piston-4-engine—Total</b> .....	<b>22</b>	<b>20</b>	<b>26</b>	<b>31</b>	<b>35</b>	<b>36</b>	<b>38</b>	<b>32</b>	<b>38</b>	<b>50</b>
DeHavilland DH114 .....	—	—	—	—	—	—	—	—	—	6
Douglas DC4 .....	—	—	—	—	—	—	—	1	3	3
Douglas DC6 .....	21	19	25	30	34	35	37	30	34	41
Douglas DC7 .....	1	1	1	1	1	1	1	1	1	—
<b>Piston-3-engine—Total</b> .....	<b>—</b>	<b>5</b>	<b>5</b>	<b>6</b>	<b>5</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>4</b>
Britten Norman MK3 .....	—	5	5	6	5	3	3	3	4	4
<b>Piston-2-engine—Total</b> .....	<b>293</b>	<b>415</b>	<b>252</b>	<b>292</b>	<b>313</b>	<b>323</b>	<b>380</b>	<b>385</b>	<b>394</b>	<b>389</b>
Beech BE18 .....	16	18	5	3	5	6	5	9	7	15
Beech BE36 .....	—	5	—	—	1	3	—	—	—	—
Beech BE55 .....	—	1	—	—	—	—	2	1	—	—
Beech BE58 .....	6	14	4	4	6	15	7	4	9	9
Beech BE65 .....	19	—	2	2	2	2	2	3	—	—
Beech BE76 .....	—	—	—	—	—	—	—	2	3	3
Beech BE80 .....	—	—	—	—	—	—	—	—	4	8
Beech BE95 .....	1	3	1	1	1	3	—	—	—	—
Britten Norman BN2A .....	25	18	14	15	16	30	29	29	7	27
Cessna C210 .....	—	6	—	—	—	—	—	—	—	—
Cessna C303T .....	—	—	—	—	—	1	1	1	1	—
Cessna C310 .....	5	5	2	2	2	—	1	1	1	2
Cessna C320 .....	1	1	—	—	—	—	—	—	—	1
Cessna C340 .....	1	—	—	—	—	—	—	—	—	—
Cessna C401 .....	1	1	1	1	1	4	—	—	—	—
Cessna C402 .....	117	126	91	110	98	101	143	147	155	112
Cessna C404 .....	—	3	1	1	1	4	4	6	5	4
Cessna C411 .....	—	—	—	—	—	—	—	—	—	1
Cessna C414 .....	—	1	1	1	—	—	—	2	1	1
Cessna C421 .....	—	2	—	—	—	1	—	—	—	1
Convair CV240 .....	23	19	13	11	9	9	10	9	12	15
Convair CV340/CV440 .....	29	30	24	25	26	21	23	17	18	14
Curtiss-Wright C46 .....	—	—	—	—	—	—	—	—	3	2
Douglas DC3 .....	12	21	12	15	19	20	38	43	39	30
Grumman G21 .....	5	7	—	—	—	—	—	—	3	4
Grumman G44 .....	4	4	—	—	—	1	1	1	1	1
Grumman G73 .....	6	—	—	2	3	4	12	11	3	5
Grumman G111 .....	2	—	—	—	—	—	2	3	6	—
Martin M404 .....	—	—	—	—	2	2	1	—	—	1
Partenavia PT68 .....	—	—	—	—	—	—	2	—	—	—

**TABLE 5.2—Continued**  
**AIRCRAFT REPORTED IN OPERATION**  
**BY AIR CARRIERS, BY MANUFACTURER AND MODEL**  
**1984–1993**

Aircraft Make and Model	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984
Piper P23 .....	11	16	8	9	9	9	11	9	3	10
Piper P28 .....	—	18	—	—	—	—	—	—	—	—
Piper P30 .....	—	—	—	—	—	—	—	—	—	1
Piper P31 .....	—	—	66	81	100	71	77	73	100	110
Piper P32 .....	—	78	4	2	2	2	2	—	—	—
Piper P34 .....	8	16	3	7	9	12	4	9	12	11
Piper P44 .....	—	1	—	—	—	1	1	1	1	1
Piper PA600 .....	1	1	—	—	1	1	2	2	—	—
Piper PA1020T .....	—	—	—	—	—	—	—	2	—	—
<b>Piston-1-engine—Total</b> .....	<b>406</b>	<b>407</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
<b>Helicopter—Total</b> .....	<b>124</b>	<b>133</b>	<b>6</b>	<b>11</b>	<b>7</b>	<b>8</b>	<b>13</b>	<b>2</b>	<b>5</b>	<b>12</b>

Note: Air carrier aircraft are aircraft carrying passengers or cargo for hire under 14 CFR 121 (large aircraft—more than 30 seats) and 14 CFR 135 (small Aircraft—30 seats or less). This definition is more encompassing than that used in the FAA Aviation Forecast—jet aircraft, 60 seats or more carrying passengers or cargo for hire.

Note: Beginning in 1987, the number of aircraft is the monthly average of the number of aircraft reported in use for the last three months of the year. Prior to 1987, it was the number of aircraft reported in use during December of the year.

Source: 1983–1991 Air Carrier Aircraft Utilization and Propulsion Aviation Standards National Field Office, Federal Aviation Administration. Beginning in 1992 the source is the Vital Information System.

\* Does not include the aircraft listed below that are operated by the On-demand Air Taxis:

1993: Piston multiengine	2,669
Piston single engine	3,043
Turboprop single engine	321
Turboprop-multiengine	1,662
Turbojet	1,020
Helicopter	1,977
<b>Total</b>	<b>10,692</b>

**TABLE 5.3**  
**TOTAL FLIGHT HOURS FOR**  
**AIRCRAFT REPORTED IN OPERATION**  
**BY AIR CARRIERS, BY MANUFACTURER AND MODEL**  
**1984-1993**

Aircraft Make and Model	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984
<b>TOTAL</b>	<b>14,358,321</b>	<b>13,839,486</b>	<b>13,483,182</b>	<b>13,500,128</b>	<b>12,687,084</b>	<b>12,284,089</b>	<b>11,885,699</b>	<b>11,221,578</b>	<b>10,498,546</b>	<b>9,674,406</b>
<b>Turbojet-4-engine—Total</b>	<b>844,109</b>	<b>886,306</b>	<b>999,133</b>	<b>1,139,210</b>	<b>1,120,917</b>	<b>1,093,392</b>	<b>997,951</b>	<b>921,409</b>	<b>817,058</b>	<b>861,389</b>
Boeing B707	17,581	25,239	34,125	39,522	40,046	43,946	36,206	37,448	15,904	39,243
Boeing B720	—	—	—	—	—	—	—	—	—	136
Boeing B747	559,776	584,095	630,850	680,668	643,231	620,327	575,426	559,137	537,954	537,142
British Aerospace Aircraft										
Group BAE146	29,630	43,261	49,806	94,574	121,415	128,339	125,918	92,431	52,452	14,140
Douglas DC8	237,122	233,711	284,352	324,446	316,225	300,780	260,401	232,393	210,748	270,728
<b>Turbojet-3-engine—Total</b>	<b>2,803,237</b>	<b>3,005,453</b>	<b>3,125,859</b>	<b>3,459,434</b>	<b>3,533,071</b>	<b>3,705,084</b>	<b>3,865,525</b>	<b>3,960,406</b>	<b>3,843,357</b>	<b>3,786,832</b>
Boeing B727	1,783,992	1,984,035	2,208,622	2,528,818	2,606,796	2,780,240	2,930,107	3,036,233	2,989,848	2,990,821
Douglas DC10/MD11	713,760	700,964	613,916	587,954	589,989	583,558	566,751	580,200	529,073	487,831
Lockheed L1011	305,485	320,454	303,321	342,662	336,286	341,286	368,667	343,973	324,436	308,180
<b>Turbojet-2-engine—Total</b>	<b>7,455,901</b>	<b>6,735,753</b>	<b>6,286,850</b>	<b>5,999,153</b>	<b>5,295,578</b>	<b>4,951,466</b>	<b>4,575,179</b>	<b>4,057,267</b>	<b>3,568,486</b>	<b>2,872,265</b>
Airbus A300	157,636	152,677	166,833	177,996	158,716	150,603	156,947	150,898	131,904	101,143
Airbus A310	78,733	84,523	79,073	80,040	76,537	61,663	27,234	17,054	5,613	—
Airbus A320	222,048	161,745	81,881	27,290	8,523	—	—	—	—	—
Boeing B737	2,549,653	2,365,822	2,318,936	2,253,106	2,039,117	1,859,347	1,730,473	1,489,831	1,312,425	1,006,238
Boeing B757	1,080,217	879,069	666,430	549,289	359,955	321,369	270,729	195,957	108,320	50,022
Boeing B767	678,602	526,801	499,962	429,958	412,183	367,591	274,429	223,227	192,467	172,705
British Aircraft BAC111	7	236	159	630	27,611	65,095	84,642	68,908	73,873	59,555
Cessna C500/C501	—	—	—	—	—	—	54	50	546	657
Cessna C550	—	—	—	10,073	3,237	—	—	—	—	—
Dassault Falcon	—	—	278	—	—	—	—	—	—	—
Dassault MD10	593	53	—	—	—	—	—	—	2,262	698
Dassault MD20	1,349	2,002	—	—	—	—	—	—	4,336	3,218
Douglas DC9/MD88	2,438,151	2,365,520	2,317,321	2,323,334	2,106,800	2,035,672	1,931,391	1,809,888	1,655,353	1,438,339
Fokker F28	247,235	196,582	155,122	145,547	101,421	88,682	97,727	98,918	73,494	33,036
Grumman G1159	720	270	413	60	—	47	—	—	334	660
Hamberger Flugzeugbau										
HFB320	433	—	—	—	—	—	—	—	—	102
Learjet LR25	524	453	291	384	482	44	—	—	—	—
Learjet LR35	—	—	151	1,446	996	1,353	1,553	2,536	7,559	5,892
<b>Turboprop-4-engine—Total</b>	<b>95,441</b>	<b>106,657</b>	<b>138,463</b>	<b>164,771</b>	<b>175,469</b>	<b>154,747</b>	<b>181,424</b>	<b>169,884</b>	<b>209,197</b>	<b>216,405</b>
Canadair CL44	76	1,409	1,892	5,896	6,527	8,427	9,355	8,687	9,147	7,567
DeHavilland DHC7	56,297	54,362	58,579	76,007	86,434	76,027	91,899	73,524	98,315	106,287
Lockheed L188	13,113	15,230	28,543	32,286	31,457	23,691	33,618	38,019	44,765	45,182
Lockheed L382	25,955	35,656	49,449	50,582	51,051	46,602	46,552	49,654	56,597	56,165
Vickers V745	—	—	—	—	—	—	—	—	373	1,204
<b>Turboprop-2-engine—Total</b>	<b>3,030,198</b>	<b>2,981,344</b>	<b>2,734,707</b>	<b>2,508,271</b>	<b>2,335,386</b>	<b>2,118,066</b>	<b>1,943,532</b>	<b>1,720,179</b>	<b>1,616,425</b>	<b>1,487,032</b>
Beech BE65	—	—	—	—	—	—	596	639	—	—
Beech BE90	—	—	—	—	40	374	303	158	360	443
Beech BE99	30,326	26,827	60,176	51,481	86,255	125,247	141,691	175,543	199,736	199,205
Beech BE100	640	627	787	828	934	769	803	259	806	202
Beech BE200	5,026	12,196	12,751	31,140	15,134	9,679	3,625	970	3,541	2,522
Beech BE1900	440,936	397,510	323,440	238,129	196,469	153,473	135,960	107,128	73,211	23,289
Beech STC18	—	—	—	—	—	—	—	982	—	648
British Aerospace Aircraft										
Group Jetstream	442,489	434,103	391,062	307,585	274,357	252,253	188,315	108,723	60,492	27,712
British Aerospace BA ATP	11,743	17,156	13,762	3,778	—	—	—	—	—	—
Canadair CL-600	9,560	—	—	—	—	—	—	—	—	—
Cessna C441	1,452	1,200	1,588	2,782	3,713	4,948	3,874	1,364	1,745	1,672
Construcciones Aero-										
nautics CA212	880	10,390	16,240	22,574	21,710	23,610	21,643	19,891	24,886	34,252
Concav CV580/CV640/										
CV600	19,266	20,125	21,709	23,534	38,641	63,141	82,371	100,288	113,063	121,399
DeHavilland DHC6	93,794	88,275	95,433	103,670	107,403	113,810	122,783	113,958	162,340	176,233
DeHavilland DHC8	287,442	242,447	174,306	160,925	127,911	80,964	55,680	36,835	7,362	—
Dornier DO228	23,121	27,448	59,906	72,680	57,357	56,580	26,032	16,044	12,306	—
Douglas DC3	—	34	—	—	—	531	—	—	1,478	—
Embraer EM110	28,205	32,270	47,802	85,513	124,773	148,880	177,781	149,585	156,363	199,536
Embraer EM120	480,408	452,114	383,804	310,440	211,897	114,296	66,054	18,838	—	—
Fairchild FH27	923	3,315	2,187	4,605	4,709	9,821	13,502	31,232	36,440	35,521

**TABLE 5.3—Continued**  
**TOTAL FLIGHT HOURS FOR**  
**AIRCRAFT REPORTED IN OPERATION**  
**BY AIR CARRIERS, BY MANUFACTURER AND MODEL**  
**1984-1993**

Aircraft Make and Model	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984
Fiarchild FH227 .....	—	269	1,030	1,509	4,209	12,169	11,787	13,244	14,491	17,053
Fokker F27 .....	33,394	49,413	61,698	65,309	60,371	50,645	59,910	61,144	40,521	25,056
GAF Nomad N22 .....	—	1,236	—	—	—	—	—	—	—	—
Grumman G73 .....	2,384	2,311	2,562	1,968	6,328	10,036	—	—	—	—
Grumman G159 .....	277	288	1,499	9,348	9,669	7,139	15,177	23,328	23,911	20,773
Grumman G500 .....	—	—	—	—	88	93	—	—	—	—
Hawker-Siddeley HS748 .....	—	—	—	—	—	—	—	—	2,500	7,385
Mitsubishi MU2 .....	512	217	222	142	—	88	256	2,980	1,390	314
Nihon YS11 .....	11,272	11,868	14,071	14,254	16,003	17,645	38,093	46,268	53,707	48,246
Nomad N24 .....	—	—	1,160	—	—	1,907	—	—	—	—
Nord ND262 .....	476	—	100	487	898	11,132	23,313	24,860	20,604	20,820
Piper 31T .....	49,949	53,249	8,256	9,024	11,410	8,232	5,656	4,865	7,003	10,103
Rockwell AC690 .....	—	—	—	—	—	4	476	3,057	3,076	2,683
Saab-Fairchild SF340 .....	409,336	395,691	287,144	197,149	171,936	152,177	98,616	56,392	20,627	386
Short SC7 .....	1,276	1,221	1,454	964	112	—	—	101	315	475
Short SD3 .....	110,407	138,658	167,255	203,871	192,509	183,422	217,177	184,680	178,862	150,714
S.N.I.A.S. ATR42 .....	208,454	180,742	174,754	142,741	120,074	60,029	27,943	5,923	—	—
S.N.I.A.S. ATR72 .....	42,120	21,681	—	—	—	—	—	—	—	—
Swearingen SA226 .....	19,989	18,837	33,583	52,104	97,484	144,032	163,994	185,243	217,667	218,716
Swearingen SA227 .....	264,141	339,626	374,966	389,737	372,992	300,940	240,121	225,657	177,622	141,674
<b>Piston-4-engine—Total .....</b>	<b>15,315</b>	<b>15,780</b>	<b>21,044</b>	<b>22,919</b>	<b>24,538</b>	<b>25,083</b>	<b>24,367</b>	<b>24,909</b>	<b>30,854</b>	<b>29,215</b>
DeHavilland DH114 .....	—	—	—	—	—	—	—	—	2,626	7,847
Douglas DC4 .....	—	419	—	266	—	—	—	1,038	1,512	720
Douglas DC6 .....	14,297	15,072	20,465	21,979	23,418	24,055	23,405	23,049	26,039	20,648
Douglas DC7 .....	1,018	289	579	674	1,120	1,028	962	822	677	—
<b>Piston-3-engine—Total .....</b>	<b>2,680</b>	<b>2,665</b>	<b>3,786</b>	<b>4,664</b>	<b>3,229</b>	<b>2,831</b>	<b>2,477</b>	<b>1,716</b>	<b>5,470</b>	<b>2,983</b>
Britten Norman MK3 .....	2,680	2,665	3,786	4,664	3,229	2,831	2,477	1,716	5,470	2,983
<b>Piston-2-engine—Total .....</b>	<b>108,289</b>	<b>101,145</b>	<b>168,388</b>	<b>193,646</b>	<b>194,168</b>	<b>229,150</b>	<b>291,397</b>	<b>360,823</b>	<b>402,377</b>	<b>410,287</b>
Aero Commander AC500 .....	—	—	—	—	—	13	—	6	28	300
Aero Commander AC600 .....	—	—	—	—	—	70	—	—	—	—
Beech BE18 .....	1,968	1,984	1,658	1,218	1,157	466	578	345	3,015	9,723
Beech A36TC .....	—	—	—	—	1,083	1,040	659	—	—	—
Beech BE55 .....	—	295	—	—	—	—	—	194	—	284
Beech BE58 .....	1,735	117	3,665	1,823	2,285	2,498	2,165	1,727	4,262	2,637
Beech BE65 .....	304	—	1,042	2,408	2,355	3,940	2,181	5,252	—	—
Beech BE76 .....	—	—	—	—	—	—	28	142	525	586
Beech BE80 .....	—	772	—	—	—	—	—	—	7,031	7,667
Beech BE95 .....	299	99	341	442	435	899	635	—	—	—
Britten Norman BN2A .....	8,687	11,213	10,288	11,379	15,033	18,129	19,729	26,166	22,774	28,306
Cessna C207T .....	—	—	—	—	639	—	—	—	—	—
Cessna C210T .....	—	—	—	—	—	67	6	—	237	207
Cessna C303T .....	—	—	—	—	—	—	440	490	372	956
Cessna C310 .....	238	1,080	376	1,135	573	—	—	—	8	20
Cessna C320 .....	—	—	—	—	—	134	—	—	—	6
Cessna C340 .....	—	1,028	—	—	—	376	—	—	—	—
Cessna C401 .....	—	—	770	1,032	1,632	—	—	—	—	—
Cessna C402 .....	83,186	75,030	74,396	86,705	86,012	104,933	139,843	184,470	191,070	166,914
Cessna C404 .....	603	—	462	468	837	2,321	4,022	4,959	4,562	6,730
Cessna C411 .....	—	—	—	—	—	—	—	—	102	135
Cessna C414 .....	—	104	133	50	—	11	189	1,279	523	522
Cessna C421 .....	—	—	—	—	26	89	—	—	46	26
Convair CV240 .....	1,518	1,354	3,618	2,950	3,045	3,694	2,967	3,106	6,284	7,861
Convair CV340/CV440 .....	2,825	2,468	6,316	6,189	6,820	6,229	6,384	5,584	4,664	6,910
Curtiss-Wright C46 .....	—	—	—	—	—	—	—	411	1,104	966
Douglas DC3 .....	3,512	2,075	3,702	5,279	7,389	14,680	21,485	25,971	25,916	23,498
Fairchild C82 .....	—	—	—	—	—	—	—	—	6	708
Grumman G21 .....	—	—	—	—	—	—	—	787	1,861	1,927
Grumman G44 .....	—	—	—	—	—	—	—	56	110	151
Grumman G73 .....	—	151	—	93	1,191	1,887	11,178	10,411	7,979	7,669
Grumman G111 .....	—	—	—	—	—	—	1,712	3,476	3,207	4,298
Martin M404 .....	—	—	—	—	—	127	10	—	217	5,094
Partenavia PT68 .....	—	—	—	—	—	13	1,362	—	—	—

**TABLE 5.3—Continued**  
**TOTAL FLIGHT HOURS FOR**  
**AIRCRAFT REPORTED IN OPERATION**  
**BY AIR CARRIERS, BY MANUFACTURER AND MODEL**  
**1984–1993**

Aircraft Make and Model	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984
Piper P23 .....	2,616	2,230	2,495	3,217	3,419	4,024	5,100	4,113	6,308	4,691
Piper P30 .....	—	—	—	—	—	—	—	—	17	460
Piper P31 .....	—	—	56,405	66,000	56,781	61,016	67,554	72,782	102,855	114,330
Piper P32 .....	479	761	933	350	530	768	698	—	—	—
Piper P34 .....	319	384	1,702	2,865	2,895	1,266	981	7,352	7,255	6,660
Piper P44 .....	—	—	86	—	20	354	524	418	39	—
Piper PA600 .....	—	—	—	43	11	106	409	321	—	—
Piper PA1020T .....	—	—	—	—	—	—	558	1,005	—	—
Piston-1-engine—Total .....	NA	927	NA	NA	NA	NA	NA	NA	NA	NA
Helicopter—Total .....	3,151	3,456	4,952	8,060	4,728	4,270	3,847	4,985	5,322	7,998

Note: Air carrier aircraft are aircraft carrying passengers or cargo for hire under 14 CFR 121 (large aircraft—more than 30 seats) and 14 CFR 135 (small aircraft—30 seats or less). This definition is more encompassing than that used in the FAA Aviation Forecast—jet aircraft, 60 seats or more carrying passengers or cargo for hire.

**TABLE 5.4**  
**TOTAL LARGE AIRCRAFT REPORTED IN OPERATION BY DOMESTIC, FLAG AND**  
**SUPPLEMENTAL/SCHEDULED**  
**CARGO AIR CARRIERS AND COMMERCIAL OPERATORS**  
**BY CARRIER, AND BY ENGINE TYPE**  
**1993**

Name of Carrier	Total All Aircraft	Turbojet				Turboprop			Piston					Rotary Wing
		Total	4-eng.	3-eng.	2-eng.	Total	4-eng.	2-eng.	Total	4-eng.	3-eng.	2-eng.	1-eng.	
<b>Total</b> .....	<b>5,319</b>	<b>4,575</b>	<b>410</b>	<b>1,292</b>	<b>2,873</b>	<b>670</b>	<b>102</b>	<b>568</b>	<b>74</b>	<b>22</b>	—	<b>52</b>	—	—
ABX Air dba Airborne Express .....	89	78	26	—	52	11	—	11	—	—	—	—	—	—
Aerial Transit CO .....	3	—	—	—	—	—	—	—	3	3	—	—	—	—
Air Transport International ...	13	13	13	—	—	—	—	—	—	—	—	—	—	—
Air Wisconsin dba United Express .....	12	12	12	—	—	—	—	—	—	—	—	—	—	—
Airmark Aviation dba Transtar Airlines .....	3	3	—	1	2	—	—	—	—	—	—	—	—	—
Alaska Airlines Inc .....	72	72	—	16	56	—	—	—	—	—	—	—	—	—
Aloha Airlines Inc .....	17	17	—	—	17	—	—	—	—	—	—	—	—	—
America West Airlines Inc ...	85	85	—	—	85	—	—	—	—	—	—	—	—	—
American Airlines Inc .....	686	686	—	192	494	—	—	—	—	—	—	—	—	—
American Int'l Airways dba Asia Pacific Int'l. ....	34	34	29	3	2	—	—	—	—	—	—	—	—	—
American Trans Air Inc .....	30	30	—	24	6	—	—	—	—	—	—	—	—	—
Amerijet International Inc .....	7	7	—	7	—	—	—	—	—	—	—	—	—	—
Arrow Air Inc .....	21	21	14	7	—	—	—	—	—	—	—	—	—	—
Atlantic Coast Airlines .....	12	—	—	—	—	12	—	12	—	—	—	—	—	—
Atlantic Southeast Airlines Inc .....	10	—	—	—	—	10	2	8	—	—	—	—	—	—
Atlas Air Inc .....	3	3	3	—	—	—	—	—	1	—	—	1	—	—
Basler Flight Service Inc .....	1	—	—	—	—	—	—	—	—	—	—	—	—	—
Buffalo Airways Inc .....	9	9	9	—	—	—	—	—	—	—	—	—	—	—
Business Express Inc .....	50	5	5	—	—	45	—	45	—	—	—	—	—	—
Capitol Air Express .....	4	4	—	4	—	—	—	—	—	—	—	—	—	—
Carnival Air Lines Inc .....	19	19	—	7	12	—	—	—	—	—	—	—	—	—
CCair Inc dba Piedmont Charter .....	13	—	—	—	—	13	—	13	—	—	—	—	—	—
Challenge Air Cargo Inc .....	4	4	1	—	3	—	—	—	1	—	—	1	—	—
Condor Aviation Inc .....	1	—	—	—	—	—	—	—	—	—	—	—	—	—
Continental Airlines dba New York Airlines .....	339	339	8	64	267	—	—	—	—	—	—	—	—	—
Continental Express Inc .....	49	—	—	—	—	49	5	44	—	—	—	—	—	—
Continental Micronesia Inc ..	12	12	—	12	—	—	—	—	—	—	—	—	—	—
Corporate Air .....	1	—	—	—	—	1	—	1	—	—	—	—	—	—
Crown Airways dba USAir Express .....	2	—	—	—	—	2	—	2	—	—	—	—	—	—
Delta Air Lines Inc .....	567	567	—	208	359	—	—	—	—	—	—	—	—	—
DHL Airways Inc .....	18	18	1	17	—	—	—	—	—	—	—	—	—	—
Eastern Air Lines Inc .....	6	6	—	—	6	—	—	—	—	—	—	—	—	—
Eclipse Airlines dba Branson Airlines .....	2	—	—	—	—	2	2	—	—	—	—	—	—	—
Emery Worldwide Airlines Inc .....	31	31	31	—	—	—	—	—	—	—	—	—	—	—
Empire Airlines dba Mahalo Air & Capitol Air .....	12	2	2	—	—	10	—	10	—	—	—	—	—	—
Era Aviation Inc .....	5	—	—	—	—	2	—	2	3	—	—	3	—	—
Evergreen International Airline .....	32	32	16	8	8	—	—	—	—	—	—	—	—	—
Executive Airlines dba American Eagle .....	19	—	—	—	—	19	—	19	—	—	—	—	—	—
Executive Flight Management dba Trans American Charter .....	1	1	—	—	1	—	—	—	—	—	—	—	—	—
Express One International Inc .....	35	35	—	30	5	—	—	—	—	—	—	—	—	—
Fairways Corp .....	1	—	—	—	—	1	—	1	—	—	—	—	—	—

**TABLE 5.4—Continued**  
**TOTAL LARGE AIRCRAFT REPORTED IN OPERATION BY DOMESTIC, FLAG AND**  
**SUPPLEMENTAL/SCHEDULED**  
**CARGO AIR CARRIERS AND COMMERCIAL OPERATORS**  
**BY CARRIER, AND BY ENGINE TYPE**  
**1993**

Name of Carrier	Total All Aircraft	Turbojet				Turboprop			Piston					Rotary
		Total	4- eng.	3- eng.	2- eng.	Total	4- eng.	2- eng.	Total	4- eng.	3- eng.	2- eng.	1- eng.	Wing
Federal Express Corp .....	207	207	7	200	—	—	—	—	—	—	—	—	—	—
Fine Airlines Inc .....	9	9	9	—	—	—	—	—	—	—	—	—	—	—
Flagship Airlines dba Amer- ican Eagle .....	89	—	—	—	—	89	—	89	—	—	—	—	—	—
Flight Trails dba Air Resorts Airlines .....	6	—	—	—	—	6	—	6	—	—	—	—	—	—
Florida West Airlines Inc .....	3	3	3	—	—	—	—	—	—	—	—	—	—	—
Grand Airways Inc .....	2	2	—	—	2	—	—	—	—	—	—	—	—	—
H C L Aviation Inc dba AV Atlantic .....	4	4	—	4	—	—	—	—	—	—	—	—	—	—
Hawaiian Airlines Inc .....	24	20	—	7	13	4	4	—	—	—	—	—	—	—
Horizon Air Industries Inc ...	28	5	—	—	5	23	—	23	—	—	—	—	—	—
International Charter Xpress 1 .....	5	5	5	—	—	—	—	—	—	—	—	—	—	—
Key Airlines Inc .....	0	—	—	—	—	—	—	—	—	—	—	—	—	—
Kitty Hawk Aircargo Inc .....	9	1	—	—	1	—	—	—	8	—	—	8	—	—
Kiwi International Air Lines ..	10	10	—	10	—	—	—	—	—	—	—	—	—	—
Markair Express Inc .....	11	—	—	—	—	11	11	—	—	—	—	—	—	—
Markair Inc .....	34	34	—	—	34	—	—	—	—	—	—	—	—	—
Mesaba Aviation dba Mesaba Northwest Airlin	27	—	—	—	—	27	—	27	—	—	—	—	—	—
MGM Grand Air Inc .....	6	6	3	3	—	—	—	—	—	—	—	—	—	—
Miami Air International Inc ...	5	5	—	5	—	—	—	—	—	—	—	—	—	—
Mid Pacific Air Corp .....	9	1	1	—	—	8	—	8	—	—	—	—	—	—
Midway Airlines Corporation	2	2	—	—	2	—	—	—	—	—	—	—	—	—
Midwest Express Airlines Inc	16	16	—	—	16	—	—	—	—	—	—	—	—	—
Millon Air Inc .....	4	4	4	—	—	—	—	—	—	—	—	—	—	—
Morris Air Corporation .....	20	20	—	—	20	—	—	—	—	—	—	—	—	—
Mountain Air Cargo Inc .....	24	—	—	—	—	24	—	24	—	—	—	—	—	—
Nations Air Express dba Miami Air Charter .....	1	—	—	—	—	—	—	—	1	—	—	1	—	—
North American Airlines .....	2	2	—	—	2	—	—	—	—	—	—	—	—	—
Northeast Express Regional Air dba Northwest Airlin	3	—	—	—	—	3	—	3	—	—	—	—	—	—
Northern Air Cargo Inc .....	14	—	—	—	—	—	—	—	14	14	—	—	—	—
Northwest Airlines Inc .....	358	358	41	87	230	—	—	—	—	—	—	—	—	—
Omni Air Express Inc .....	1	1	—	1	—	—	—	—	—	—	—	—	—	—
Paradise Island Airlines Inc .	5	—	—	—	—	5	5	—	—	—	—	—	—	—
Patriot Airlines Inc .....	2	2	—	2	—	—	—	—	—	—	—	—	—	—
Pennsylvania Commuter dba Allegheny Commuter	41	—	—	—	—	41	—	41	—	—	—	—	—	—
Airlines .....	41	—	—	—	—	41	—	41	—	—	—	—	—	—
Piedmont Airlines dba Henson Aviation/USAir	39	—	—	—	—	39	—	39	—	—	—	—	—	—
Express .....	39	—	—	—	—	39	—	39	—	—	—	—	—	—
Private Jet Expeditions Inc ..	11	11	—	—	11	—	—	—	—	—	—	—	—	—
Reeve Aleutian Airways Inc	41	12	—	12	—	29	23	6	—	—	—	—	—	—
Reno Air Inc .....	17	17	—	—	17	—	—	—	—	—	—	—	—	—
Renown Aviation Inc .....	12	—	—	—	—	4	1	3	8	—	—	8	—	—
Rhoades Aviation Inc .....	7	—	—	—	—	1	—	1	6	—	—	6	—	—
Rich International Airways Inc .....	8	8	4	4	—	—	—	—	—	—	—	—	—	—
Ross Aviation Inc .....	1	—	—	—	—	1	1	—	—	—	—	—	—	—
Ryan International Airlines Inc .....	33	33	—	26	7	—	—	—	—	—	—	—	—	—
Salair Inc dba Classic Air- lines .....	3	—	—	—	—	2	—	2	1	—	—	1	—	—



**TABLE 5.4—Continued**  
**TOTAL LARGE AIRCRAFT REPORTED IN OPERATION BY DOMESTIC, FLAG AND**  
**SUPPLEMENTAL/SCHEDULED**  
**CARGO AIR CARRIERS AND COMMERCIAL OPERATORS**  
**BY CARRIER, AND BY ENGINE TYPE**  
**1993**

Name of Carrier	Total All Air- craft	Turbojet				Turboprop			Piston					Rotary Wing
		Total	4- eng.	3- eng.	2- eng.	Total	4- eng.	2- eng.	Total	4- eng.	3- eng.	2- eng.	1- eng.	
Shuttle Inc dba USAir Shut- tle .....	19	19	—	19	—	—	—	—	—	—	—	—	—	—
Sierra Pacific Airlines Inc ....	7	4	—	—	4	1	—	1	2	—	—	2	—	—
Simmons Airlines dba Amer- ican Eagle .....	79	—	—	—	—	79	—	79	—	—	—	—	—	—
Southern Air Transport dba Polar Air Cargo .....	29	11	11	—	—	18	18	—	—	—	—	—	—	—
Southwest Airlines Co .....	158	158	—	—	158	—	—	—	—	—	—	—	—	—
Spirit Airlines Inc .....	4	4	—	—	4	—	—	—	—	—	—	—	—	—
Sun Country Airlines Inc .....	12	12	—	12	—	—	—	—	—	—	—	—	—	—
Sun Jet International Airlines	1	1	—	—	1	—	—	—	—	—	—	—	—	—
Target Airways dba Great American Airways .....	3	3	—	—	3	—	—	—	—	—	—	—	—	—
Tatonduk Outfitters Ltd dba Air Cargo Express .....	1	—	—	—	—	—	—	—	1	1	—	—	—	—
Tem Enterprises dba Casino Express .....	2	2	—	—	2	—	—	—	—	—	—	—	—	—
Tower Air dba Trustair .....	14	14	14	—	—	—	—	—	4	4	—	—	—	—
Trans Air Link Corp .....	4	—	—	—	—	—	—	—	7	—	—	7	—	—
Trans Florida Airlines Inc ....	7	—	—	—	—	—	—	—	—	—	—	—	—	—
Trans States Airlines dba USAir Express .....	11	—	—	—	—	11	—	11	—	—	—	—	—	—
Trans World Airlines Inc .....	191	191	12	79	100	—	—	—	—	—	—	—	—	—
Trans World Express Inc .....	19	—	—	—	—	19	8	11	—	—	—	—	—	—
Ufs Inc dba United Express	9	—	—	—	—	9	—	9	—	—	—	—	—	—
Ultrair Inc .....	8	8	—	8	—	—	—	—	—	—	—	—	—	—
United Air Lines Inc .....	539	539	59	128	352	—	—	—	—	—	—	—	—	—
United Parcel Service Co ....	177	177	65	67	45	—	—	—	—	—	—	—	—	—
USAir Inc .....	444	444	—	8	436	—	—	—	—	—	—	—	—	—
Valujet Airlines Inc .....	6	6	—	—	6	—	—	—	—	—	—	—	—	—
Viking International Airlines dba Eagle Airlines .....	5	2	—	—	2	1	—	1	2	—	—	2	—	—
Viscount Air Service Inc .....	18	18	—	—	18	—	—	—	—	—	—	—	—	—
Westates Airlines Inc .....	4	0	—	—	—	1	—	1	3	—	—	3	—	—
Wings West Airlines dba American Eagle .....	15	0	—	—	—	15	—	15	—	—	—	—	—	—
World Airways Inc .....	9	9	—	9	—	—	—	—	—	—	—	—	—	—
Worldwide Airline Services dba Leisure Air .....	7	7	—	—	7	—	—	—	—	—	—	—	—	—
Wrangler Aviation dba Tradewinds Int'l Airlines ...	2	1	—	1	—	1	1	—	—	—	—	—	—	—
Zantop International Airlines	32	2	2	—	—	21	21	—	9	—	—	9	—	—

Note: Air carrier aircraft are aircraft carrying passengers or cargo for hire under 14 CFR 121 (large aircraft-more than 30 seats) and 14 CFR 135 (small aircraft-30 seats or less). This definition is more encompassing than that used in the FAA Aviation Forecast-jet aircraft, 60 seats or more carrying passengers or cargo for hire.

Source: Vital Information System.

**TABLE 5.5**  
**TOTAL SMALL AIRCRAFT REPORTED IN OPERATION**  
**BY COMMUTER AIR CARRIERS AND ON-DEMAND AIR TAXIS**  
**BY CARRIER, AND BY ENGINE TYPE**  
**1993**

Name of Carrier	Total All Aircraft	Turbojet				Turboprop				Piston					Rotary Wing
		Total	4-eng.	3-eng.	2-eng.	Total	4-eng.	2-eng.	1-eng.	Total	4-eng.	3-eng.	2-eng.	1-eng.	
Total .....	1,978	9	—	—	9	1,198	—	1,183	15	647	—	—	241	406	124
41 Mile Air Ltd .....	16	—	—	—	—	1	—	1	—	15	—	—	—	15	—
Air Alpha Inc .....	2	—	—	—	—	2	—	2	—	—	—	—	—	—	—
Air Cape dba Nan-tucket Airlines .....	6	—	—	—	—	—	—	—	—	6	—	—	6	—	—
Air La Inc .....	2	—	—	—	—	2	—	2	—	—	—	—	—	—	—
Air Midwest dba USAir Express .....	15	—	—	—	—	15	—	15	—	—	—	—	—	—	—
Air Molokai Inc .....	3	—	—	—	—	—	—	—	—	3	—	—	3	—	—
Air Nevada Airlines Inc .....	12	—	—	—	—	—	—	—	—	12	—	—	9	3	—
Air St Thomas dba AAA Air Charter .....	7	—	—	—	—	—	—	—	—	7	—	—	7	—	—
Air Sunshine Inc .....	5	—	—	—	—	—	—	—	—	5	—	—	5	—	—
Airvantage Inc .....	6	—	—	—	—	6	—	6	—	—	—	—	—	—	—
Airways International Inc .....	31	—	—	—	—	2	—	2	—	29	—	—	29	—	—
Alaska Island Air Inc .....	12	—	—	—	—	1	—	—	1	11	—	—	4	7	—
Alaska Juneau Aeronautics dba Wings of Alaska .....	21	—	—	—	—	—	—	—	—	21	—	—	—	21	—
Allied Airlines Inc .....	2	—	—	—	—	2	—	2	—	—	—	—	—	—	—
Aloha Island Air dba Islandair .....	8	—	—	—	—	8	—	8	—	—	—	—	—	—	—
Alpha Aviation dba TW Express .....	3	—	—	—	—	3	—	3	—	—	—	—	—	—	—
Arctic Circle Air Service Inc .....	9	—	—	—	—	2	—	2	—	7	—	—	1	6	—
Arizona Airways Inc .....	2	—	—	—	—	2	—	2	—	—	—	—	—	—	—
Arizona Pacific Airline Inc .....	5	—	—	—	—	3	—	3	—	2	—	—	—	2	—
Atlantic Coast Airlines .....	49	—	—	—	—	49	—	49	—	—	—	—	—	—	—
Atlantic Southeast Airlines Inc .....	70	—	—	—	—	70	—	70	—	—	—	—	—	—	—
Avi dba Air Vegas .....	15	—	—	—	—	3	—	3	—	12	—	—	9	3	—
Aviation Associates Inc .....	12	—	—	—	—	12	—	12	—	—	—	—	—	—	—
Aviation Sales Incorporated .....	8	2	—	—	2	2	—	2	—	4	—	—	4	—	—
Aviation Services dba Freedom Air .....	8	—	—	—	—	2	—	2	—	6	—	—	—	6	—
Baker Aviation Inc .....	8	—	—	—	—	1	—	1	—	7	—	—	2	5	—
Bellair Inc .....	2	—	—	—	—	—	—	—	—	2	—	—	—	2	—
Bemidji Aviation Services dba Air Direct Charter .....	24	—	—	—	—	4	—	4	—	20	—	—	17	3	—
Bering Air Inc .....	15	—	—	—	—	7	—	7	—	8	—	—	4	4	—
Bidzy Ta Hot Aana dba Tanana Air Service .....	9	—	—	—	—	2	—	2	—	7	—	—	—	7	—
Big Sky Transportation Co .....	7	—	—	—	—	5	—	5	—	2	—	—	2	—	—
Business Express Inc .....	21	—	—	—	—	21	—	21	—	—	—	—	—	—	—
Cape Smythe Air Service Inc .....	20	—	—	—	—	10	—	10	—	10	—	—	1	9	—
CCair dba Piedmont Charter .....	10	—	—	—	—	10	—	10	—	—	—	—	—	—	—

**TABLE 5.5—Continued**  
**TOTAL SMALL AIRCRAFT REPORTED IN OPERATION**  
**BY COMMUTER AIR CARRIERS AND ON-DEMAND AIR TAXIS**  
**BY CARRIER, AND BY ENGINE TYPE**  
**1993**

Name of Carrier	Total All Aircraft	Turbojet				Turboprop				Piston					Rotary Wing
		Total	4-eng.	3-eng.	2-eng.	Total	4-eng.	2-eng.	1-eng.	Total	4-eng.	3-eng.	2-eng.	1-eng.	
Champlain Enterprises dba USAir Express .....	28	—	—	—	—	27	—	27	—	1	—	—	1	—	—
Chautauqua Airlines dba USAir Express .....	16	—	—	—	—	16	—	16	—	—	—	—	—	—	—
Chicago Express Airlines Inc .....	8	—	—	—	—	8	—	8	—	—	—	—	—	—	—
Coastal Air Transport Inc .....	1	—	—	—	—	—	—	—	—	1	—	—	1	—	—
Colgan Air Inc .....	6	—	—	—	—	6	—	6	—	—	—	—	—	—	—
Comair Inc .....	73	5	—	—	5	68	—	68	—	—	—	—	—	—	—
Conquest Airlines Corp .....	12	—	—	—	—	12	—	12	—	—	—	—	—	—	—
Continental Express Inc .....	48	—	—	—	—	48	—	48	—	—	—	—	—	—	—
Crown Airways dba USAir Express .....	8	—	—	—	—	8	—	8	—	—	—	—	—	—	—
Direct Air dba Midway Connection ....	7	—	—	—	—	7	—	7	—	—	—	—	—	—	—
Empire Airlines dba Mahalo Air & Capital Air .....	4	—	—	—	—	4	—	4	—	—	—	—	—	—	—
Era Aviation Inc .....	109	1	—	—	1	13	—	11	2	—	—	—	—	—	95
Exec Express II dba Lone Star Airlines ..	8	—	—	—	—	8	—	8	—	—	—	—	—	—	—
Express Airlines I dba Northwest Airlink .....	39	—	—	—	—	39	—	39	—	—	—	—	—	—	—
Express Airlines II dba Northwest Airlink .....	30	—	—	—	—	30	—	30	—	—	—	—	—	—	—
F S Air Service Inc ..	10	—	—	—	—	4	—	4	—	6	—	—	4	2	—
Flagship Airlines dba American Eagle ....	47	—	—	—	—	47	—	47	—	—	—	—	—	—	—
Flamenco Airways Inc .....	12	—	—	—	—	—	—	—	—	12	—	—	12	—	—
Flying Boat dba Chalk's Int'l. Airlines .....	8	—	—	—	—	—	—	—	—	8	—	—	8	—	—
Four Star Air Cargo ..	8	—	—	—	—	—	—	—	—	8	—	—	8	—	—
Frontier Flying Service Inc .....	11	—	—	—	—	9	—	9	—	2	—	—	1	1	—
Glacier Bay Airways Inc .....	11	—	—	—	—	2	—	—	2	9	—	—	—	9	—
GP Express Airlines Inc .....	13	—	—	—	—	13	—	13	—	—	—	—	—	—	—
Grand Airways Inc ...	5	—	—	—	—	5	—	5	—	—	—	—	—	—	—
Grant Aviation dba Delta Air Service ..	4	—	—	—	—	1	—	1	—	3	—	—	—	3	—
Great Lakes Aviation Ltd .....	39	—	—	—	—	34	—	34	—	5	—	—	3	2	—
Great Northern Airlines Inc .....	6	—	—	—	—	—	—	—	—	6	—	—	—	6	—
Gulfstream International Airline .....	9	—	—	—	—	3	—	3	—	6	—	—	6	—	—
Hageland Aviation Services Inc .....	13	—	—	—	—	—	—	—	—	13	—	—	2	11	—
Haines Airways Inc ..	7	—	—	—	—	1	—	1	—	6	—	—	1	5	—
Harbor Airlines Inc ...	5	—	—	—	—	4	—	4	—	1	—	—	—	1	—

**TABLE 5.5—Continued**  
**TOTAL SMALL AIRCRAFT REPOTED IN OPERATION**  
**BY COMMUTER AIR CARRIERS AND ON-DEMAND AIR TAXIS**  
**BY CARRIER, AND BY ENGINE TYPE**  
**1993**

Name of Carrier	Total All Aircraft	Turbojet				Turboprop				Piston					Rotary Wing
		Total	4-eng.	3-eng.	2-eng.	Total	4-eng.	2-eng.	1-eng.	Total	4-eng.	3-eng.	2-eng.	1-eng.	
Horizon Air industries Inc .....	28	—	—	—	—	28	—	28	—	—	—	—	—	—	—
Hyannis Air Service dba Cape Air .....	12	—	—	—	—	—	—	—	—	12	—	—	12	—	—
Jetstream International Airlines dba USAir Express	33	—	—	—	—	33	—	33	—	—	—	—	—	—	—
Jib dba Action Air Charters .....	9	—	—	—	—	4	—	4	—	5	—	—	2	3	—
Kenmore Air Harbor Inc .....	14	—	—	—	—	—	—	—	—	14	—	—	—	14	—
Ketchikan Air Service Inc .....	12	—	—	—	—	—	—	—	—	12	—	—	—	12	1
L A B Flying Service Inc .....	35	—	—	—	—	1	—	1	—	33	—	—	6	27	—
Larrys Flying Service Inc .....	16	—	—	—	—	5	—	5	—	11	—	—	2	9	—
Las Vegas Airlines Inc .....	6	—	—	—	—	6	—	6	—	—	—	—	—	—	—
Loken Aviation Inc .....	5	—	—	—	—	—	—	—	—	5	—	—	—	5	—
Markair Express Inc .....	66	—	—	—	—	28	—	28	—	38	—	—	—	38	—
Mesa Airlines dba USAir Express .....	105	—	—	—	—	105	—	105	—	—	—	—	—	—	—
Mesaba Northwest Link .....	22	—	—	—	—	22	—	22	—	—	—	—	—	—	—
Midway Airlines Corporation .....	3	—	—	—	—	2	—	2	—	1	—	—	—	1	—
New England Airlines Inc .....	7	—	—	—	—	—	—	—	—	7	—	—	2	5	—
New Hampshire Helicopters dba Business Helicopters ...	2	—	—	—	—	—	—	—	—	—	—	—	—	—	2
New York Helicopter dba National Helicopter Corp of America .....	10	—	—	—	—	—	—	—	—	—	—	—	—	—	10
Northeast Express Regional Air dba Northwest Air link ..	21	—	—	—	—	21	—	21	—	—	—	—	—	—	1
Olson Air Service Inc .....	8	—	—	—	—	—	—	—	—	7	—	—	3	4	1
Pacific Island Aviation Inc .....	12	—	—	—	—	4	—	3	1	7	—	—	4	3	1
Packard, Thomas G dba Cloumbia Pacific Airlines .....	1	—	—	—	—	—	—	—	—	1	—	—	1	—	—
Papillon Airways Inc .....	14	—	—	—	—	—	—	—	—	—	—	—	—	—	14
Paradise Island Airlines Inc .....	1	—	—	—	—	1	—	1	—	—	—	—	—	—	—
Peninsula Airways dba Penair .....	40	—	—	—	—	16	—	14	2	24	—	—	10	14	—
Pennsylvania Commuter Airlines dba Allegheny Commuter Airlines .....	9	—	—	—	—	9	—	9	—	—	—	—	—	—	—
Precision Valley Aviation dba Northwest Air link ..	13	—	—	—	—	13	—	13	—	—	—	—	—	—	—

**TABLE 5.5—Continued**  
**TOTAL SMALL AIRCRAFT REPORTED IN OPERATION**  
**BY COMMUTER AIR CARRIERS AND ON-DEMAND AIR TAXIS**  
**BY CARRIER, AND BY ENGINE TYPE**  
**1993**

Name of Carrier	Total All Aircraft	Turbojet				Turboprop				Piston					Rotary Wing
		Total	4- eng.	3- eng.	2- eng.	Total	4- eng.	2- eng.	1- eng.	Total	4- eng.	3- eng.	2- eng.	1- eng.	
Promech dba Sea- borne Seaplane Adventures .....	8	—	—	—	—	1	—	1	—	7	—	—	—	7	—
Rader Aviation dba Greenbrier Airlines	8	1	—	—	1	3	—	3	—	4	—	—	2	2	—
Redwing Airways Inc	7	—	—	—	—	—	—	—	—	7	—	—	6	1	—
Ross Aviation Inc ....	2	—	—	—	—	2	—	2	—	—	—	—	—	—	—
Ryan Air Service Inc	17	—	—	—	—	1	—	—	1	16	—	—	4	12	—
Safe Air International Island Express .....	4	—	—	—	—	—	—	—	—	4	—	—	4	—	—
Samoa Aviation Inc ..	3	—	—	—	—	3	—	3	—	—	—	—	—	—	—
Scenic Airlines dba Arizona Air .....	57	—	—	—	—	29	—	26	3	28	—	—	—	28	—
Skagway Air Service Inc .....	11	—	—	—	—	—	—	—	—	11	—	—	2	9	—
Skywest Airlines Inc .	53	—	—	—	—	53	—	53	—	—	—	—	—	—	—
Somerset Aviation Corp .....	1	—	—	—	—	—	—	—	—	1	—	—	—	1	—
Southeast Air Char- ter .....	3	—	—	—	—	—	—	—	—	3	—	—	—	3	—
Springdale Air Serv- ice Inc .....	21	—	—	—	—	2	—	2	—	19	—	—	19	—	—
Taquan Air Service Inc .....	14	—	—	—	—	1	—	—	1	13	—	—	—	13	—
Tatonduk Outfitters dba Air Cargo Ex- press .....	3	—	—	—	—	—	—	—	3	—	—	—	3	—	—
Trans Executive Air- lines of HA dba Scenic Pacific Air .	4	—	—	—	—	—	—	—	—	4	—	—	4	—	—
Trans States Airlines dba USAir Express	32	—	—	—	—	32	—	32	—	—	—	—	—	—	—
Trans World Express Inc .....	8	—	—	—	—	8	—	8	—	—	—	—	—	—	—
Vieques Air link Inc ..	7	—	—	—	—	—	—	—	—	7	—	—	7	—	—
Village Aviation dba camai Air .....	11	—	—	—	—	3	—	3	—	8	—	—	—	8	—
Walkers Aviation Services Inc .....	1	—	—	—	—	1	—	1	—	—	—	—	—	—	—
Warbelows Air Ven- tures Inc .....	9	—	—	—	—	4	—	4	—	5	—	—	—	5	—
West Isle Air Inc .....	6	—	—	—	—	—	—	—	—	6	—	—	1	5	—
Westair commuter Airlines dba united Express .....	51	—	—	—	—	51	—	51	—	—	—	—	—	—	—
Wings West Airlines dba American Eagle .....	27	—	—	—	—	27	—	27	—	—	—	—	—	—	—
Wra Inc .....	7	—	—	—	—	4	—	4	—	3	—	—	—	3	—
Wright Air Service Inc .....	14	—	—	—	—	6	—	4	2	8	—	—	—	8	—
Yutana Airlines Inc ...	10	—	—	—	—	2	—	2	—	8	—	—	—	8	—
Yute Air Alaska Inc ..	25	—	—	—	—	3	—	3	—	22	—	—	—	22	—

Note: Air carrier aircraft are aircraft carrying passengers or cargo for hire under 14 CFR 121 (large aircraft-more than 30 seats) and 14 CFR 135 (small aircraft-30 seats or less). This definition is more encompassing than that used in the FAA Aviation Forecast-jet aircraft, 60 seats or more carrying passengers or cargo for hire.  
Source: Vital Information System.

## VI. U.S. CERTIFICATED AIR CARRIERS—OPERATING DATA

The traffic and financial data contained in this chapter include data for all U.S. Certificated Air Carriers—those holding a certificate issued under Section 401 of the Federal Aviation Act of 1958; and the commuter air carriers—those holding a certificate under Section 298C of the Federal Aviation Act of 1958.

The data are classified in two broad operational categories: “domestic” and “international”. “Domestic” encompasses operations within and between the 50 states of the United States, the District of Columbia, the Commonwealth of Puerto Rico and the Virgin Islands. It also encompasses Canadian transborder operations and for certain carriers, Mexican transborder operations. All other categories are considered “international”.

The certificated carriers are also grouped into “large” and “small” according to the size aircraft that the carrier operates. A “large” carrier is one that operates aircraft designed to have a maximum passenger seating capacity of 60 seats or more or a maximum payload capacity of 18,000 pounds or more, or conducts international operations. A “small” certificated carrier operates aircraft of less than 60 seats or a payload capacity of less than 18,000. The commuter carriers are grouped with the small certificated carriers. Note that these definitions for large and small aircraft differ from the definitions used in Chapter 5.

The large certificated air carriers are grouped according to their total operating revenue as listed below:

Carrier Groups	Carriers with Annual Operating Revenues of:
Major .....	\$1,000,000,000+
Nationals .....	\$100,000,000–\$1,000,000,000
Large Regionals .....	\$10,000,000–\$99,999,999
Medium Regionals .....	0–\$9,999,999

The tables in this chapter are divided into two groups: 6.1–6.15 cover the large carriers and 6.16–6.18 cover the small commuter and large certificated medium regional carriers. Please note that some large certificated medium regional carriers are included in both groups of tables. The information for the large air carriers was obtained from the following sources published by the Research & Special Programs Administration of the Department of Transportation.

*Air Carrier Traffic Statistics* compiled from RSPA Form 41 Schedules T–1(a), T–1(b) and T–1(c).

*Air Carrier Financial Statistics* compiled from RSPA Form 41 Schedules B–1 and P–1.

The information for the small certificated, commuter and large certificated medium regional carriers was obtained from:

*Air Carrier Industry Scheduled Service Traffic Statistics: Medium Regional Section:* compiled from RSPA Form 298C Schedules A–1 and T–1.

**TABLE 6.1**  
**LARGE CERTIFICATED AIR CARRIERS**  
**1992 AND 1993**

**MAJORS**

America West	Southwest
American	Trans World
Continental	United
Delta	United Parcel
Federal Express	US Air
Northwest	

**NATIONALS**

Air Wisconsin	Hawaiian
Air Wisconsin Corp.	Horizon Air
Alaska	Markair
Aloha	Midwest Express
American Trans Air	Southern Air
Atlantic Southeast	Sun Country
Business Express	Tower
DHL Airways	USAir Shuttle
Emery	Westair
Evergreen	World

**LARGE REGIONALS**

Air Transport Int'l	MGM Grand
American Int'l	Morris
Amerijet	Northern Air
Arrow	Private Jet
Braniff Int'l	Reeve
Carnival	Reno
Challenge Air Cargo	Rich
Executive Airlines	Simmons
Express One	Trans Continental
Florida West	Trans States
Key	UFS, Inc.
Kiwi	Zantop

**MEDIUM REGIONALS**

Aerial	Miami Air
Airmark	Million
Atlas Air	North American
AV Atlantic	Patriot
Buffalo	Ryan International
Casino Express	Sierra Pacific
Continental Micronesia	Spirit Air
Eagle Airlines	Trans American Charter
Empire	Trans Air Link
Fine Airlines	Ultrair
Great Americans	Wilbur's
Int'l. Cargo Xpress	Worldwide
Jet Fleet	Wrangler

**TABLE 6.2**  
**TRAFFIC DATA, ALL SERVICES (SCHEDULED AND NONSCHEDULED)**  
**OF THE LARGE CERTIFICATED AIR CARRIERS**  
**1992 AND 1993**

Traffic Category	Total System <sup>1</sup>		Domestic Operations		International Operations	
	1992 <sup>2</sup>	1993 <sup>3</sup>	1992 <sup>2</sup>	1993 <sup>3</sup>	1992 <sup>2</sup>	1993 <sup>3</sup>
Revenue Passenger Miles Flown (000) .....	493,714,727	504,778,232	354,764,451	361,319,083	138,950,276	143,459,149
Available Seat Miles (000) .....	772,869,175	792,123,773	567,040,000	580,775,708	205,829,175	211,348,065
Revenue Passenger Enplanements (000) ....	484,951	497,786	437,972	448,851	46,979	48,935
Revenue Ton Miles Flown (000) <sup>1</sup> .....	66,679,809	69,308,462	45,296,134	46,658,726	21,383,675	22,649,736
Passenger .....	49,373,197	50,477,539	35,476,444	36,131,620	13,896,753	14,345,919
Freight .....	15,237,663	16,656,565	8,247,046	8,856,224	6,990,617	7,800,341
U.S. Mail .....	2,068,962	2,174,355	1,572,656	1,670,880	496,306	503,475
Foreign Mail .....	0	0	0	0	0	0
Revenue Aircraft Miles Flown (000) .....	4,899,247	5,099,220	3,994,821	4,144,067	904,426	955,153

<sup>1</sup> Details may not add to total due to rounding.

<sup>2</sup> Revised.

<sup>3</sup> Preliminary.

Source: "Air Carrier Traffic Statistics"—RSPA.



**TABLE 6.3**  
**REVENUE AIRCRAFT DEPARTURES, MILES AND HOURS FLOWN,**  
**AND AVERAGE SPEED IN DOMESTIC ALL SERVICES**  
**OF THE LARGE CERTIFICATED AIR CARRIERS**  
**1984-1993**

Year	Revenue Aircraft Departures	Revenue Aircraft Miles Flown (000)	Revenue Aircraft Hours Flown	Average Airborne Speed (Miles Per Hour)
1984 .....	5,358,454	2,875,402	6,970,886	412
1985 .....	5,760,232	3,046,440	7,457,030	409
1986 .....	6,336,150	3,421,492	8,223,615	416
1987 .....	6,511,609	3,652,542	8,823,269	414
1988 .....	6,607,067	3,738,242	9,135,430	409
1989 .....	6,528,085	3,748,139	9,222,252	406
1990 .....	6,756,704	3,963,263	9,717,375	408
1991 .....	6,622,847	3,854,416	9,492,561	406
1992 <sup>1</sup> .....	6,881,161	3,994,821	9,824,419	407
1993 <sup>2</sup> .....	7,061,783	4,144,067	10,228,023	405

<sup>1</sup> Revised.

<sup>2</sup> Preliminary.

Source: "Air Carrier Traffic Statistics"—RSPA.

**TABLE 6.4**  
**REVENUE AIRCRAFT DEPARTURES, MILES AND HOURS FLOWN,**  
**AND AVERAGE SPEED IN INTERNATIONAL ALL SERVICES**  
**OF THE LARGE CERTIFICATED AIR CARRIERS**  
**1983-1992**

Year	Revenue Aircraft Departures	Revenue Aircraft Miles Flown (000)	Revenue Aircraft Hours Flown	Average Airborne Speed (Miles Per Hour)
1984 .....	241,087	388,794	792,267	491
1985 .....	244,888	415,355	846,197	491
1986 .....	271,735	451,338	923,641	489
1987 .....	311,411	529,786	1,082,189	490
1988 .....	354,463	615,270	1,260,927	488
1989 .....	391,786	693,887	1,426,410	486
1990 .....	419,522	760,338	1,556,760	488
1991 .....	418,200	806,606	1,644,917	490
1992 <sup>1</sup> .....	439,431	904,426	1,826,032	495
1993 <sup>2</sup> .....	456,775	955,153	1,923,078	497

<sup>1</sup> Revised.

<sup>2</sup> Preliminary.

Source: "Air Carrier Traffic Statistics"—RSPA.

**TABLE 6.5**  
**TOTAL TON-MILES AVAILABLE IN ALL SERVICES OF THE**  
**LARGE CERTIFICATED AIR CARRIERS**  
**1984-1993**  
(Thousands of Ton-Miles)

Year	Large Certificated Air Carriers		
	Total System <sup>1</sup>	Domestic Operations	International Operations
1984 .....	76,298,288	58,942,974	17,355,314
1985 .....	80,565,182	61,337,807	19,227,375
1986 .....	90,243,958	69,771,737	20,472,221
1987 .....	99,152,795	75,741,397	23,411,398
1988 .....	105,272,555	78,264,976	27,107,579
1989 .....	109,397,126	78,955,003	30,442,123
1990 .....	117,112,475	83,354,510	33,757,965
1991 .....	116,374,506	80,879,199	35,495,307
1992 <sup>1</sup> .....	122,267,462	84,028,272	38,239,190
1993 <sup>2</sup> .....	125,853,376	86,117,842	39,735,534

<sup>1</sup> Categories may not add to total due to rounding.

<sup>2</sup> Revised.

<sup>3</sup> Preliminary.

Source: "Air Carrier Traffic Statistics"—RSPA.

**TABLE 6.6**  
**REVENUE TON-MILES FLOWN IN ALL SERVICES BY**  
**LARGE CERTIFICATED AIR CARRIERS**  
**1984-1993**  
(Thousands of Tons)

Year	Large Certificated Air Carriers		
	Total System <sup>1</sup>	Domestic Operations	International Operations
1984 .....	41,277,948	30,561,436	10,716,512
1985 .....	44,154,779	32,939,216	11,215,563
1986 .....	48,883,854	37,148,059	11,735,795
1987 .....	54,917,632	40,509,782	14,407,850
1988 .....	58,397,186	41,598,662	16,798,524
1989 .....	61,095,371	42,475,761	18,619,610
1990 .....	63,627,077	43,651,162	19,975,915
1991 .....	62,479,347	42,668,248	19,811,099
1992 <sup>2</sup> .....	66,679,809	45,296,134	21,383,675
1993 <sup>3</sup> .....	69,308,462	46,658,726	22,649,736

<sup>1</sup> Categories may not add to total due to rounding.

<sup>2</sup> Revised.

<sup>3</sup> Preliminary.

Source: "Air Carrier Traffic Statistics"—RSPA.

**TABLE 6.7**  
**PASSENGER OPERATIONS IN SCHEDULED DOMESTIC OPERATIONS**  
**OF THE LARGE CERTIFICATED AIR CARRIERS**  
**1984-1993**

Year	Revenue Passenger Enplanements (000)	Revenue Passenger Miles (000)	Available Seat-Miles (000)	Revenue Passenger Load Factor <sup>1</sup> (Percent)	Average On-line Passenger Trip Length (Miles)	Average Passenger Revenue Per Passenger Miles (Cents)
1984 .....	321,047	243,692,254	422,506,609	57.7	759	12.79
1985 .....	357,109	270,584,011	445,825,864	60.7	758	12.32
1986 .....	393,864	302,089,903	497,990,815	60.7	767	11.18
1987 .....	416,831	324,637,336	526,958,361	61.6	779	11.42
1988 .....	419,210	329,309,489	536,662,591	61.4	786	12.31
1989 .....	416,331	329,975,206	530,079,041	62.3	792	13.08
1990 .....	423,565	340,230,892	563,064,938	60.4	803	13.08
1991 .....	412,360	332,565,881	543,637,976	61.2	806	13.24
1992 <sup>2</sup> .....	431,693	347,931,400	557,988,917	62.4	806	13.00
1993 <sup>3</sup> .....	441,902	353,630,224	570,680,011	62.0	800	13.94

<sup>1</sup> Percent revenue passenger-miles of available seat-miles.

<sup>2</sup> Revised.

<sup>3</sup> Preliminary.

Source: "Air Carrier Traffic Statistics"—RSPA.

**TABLE 6.8**  
**PASSENGER OPERATIONS IN SCHEDULED INTERNATIONAL OPERATIONS**  
**OF THE LARGE CERTIFICATED AIR CARRIERS**  
**1984-1993**

Year	Revenue Passenger Enplanements (000)	Revenue Passenger Miles (000)	Available Seat-Miles (000)	Revenue Passenger Load Factor <sup>1</sup> (Percent)	Average On- line Passenger Trip Length (Miles)	Average Passenger Revenue Per Passenger Miles (Cents)
1984 .....	23,636	61,423,601	92,816,730	66.2	2,599	9.38
1985 .....	24,913	65,819,010	101,962,568	64.6	2,642	9.80
1986 .....	25,082	64,455,952	109,445,032	58.9	2,570	10.16
1987 .....	30,847	79,834,148	121,762,577	65.6	2,588	9.82
1988 .....	35,404	93,992,070	140,139,737	67.1	2,655	10.40
1989 .....	37,361	102,739,103	154,296,835	66.6	2,750	10.36
1990 .....	41,995	117,695,394	170,309,955	69.1	2,803	10.83
1991 .....	39,941	115,388,948	171,561,164	67.3	2,889	11.32
1992 <sup>2</sup> .....	43,415	130,622,308	194,783,518	67.1	3,009	11.99
1993 <sup>3</sup> .....	45,347	135,506,911	200,150,549	67.7	2,988	11.74

<sup>1</sup> Percent revenue passenger-miles of available seat-miles.

<sup>2</sup> Revised.

<sup>3</sup> Preliminary.

Source: "Air Carrier Traffic Statistics"—RSPA.

**TABLE 6.9**  
**REVENUE AIRCRAFT-MILES FLOWN IN ALL SERVICES**  
**OF LARGE CERTIFICATED AIR CARRIERS**  
**1984-1993**  
(Thousands of Miles)

Year	Total <sup>1</sup>	Domestic Operations	International Operations
1984 .....	3,264,196	2,875,402	388,794
1985 .....	3,461,795	3,046,440	415,355
1986 .....	3,872,830	3,421,492	451,338
1987 .....	4,182,327	3,652,542	529,786
1988 .....	4,353,512	3,738,242	615,270
1989 .....	4,442,026	3,748,139	693,887
1990 .....	4,723,601	3,963,263	760,338
1991 .....	4,661,022	3,854,416	806,606
1992 <sup>2</sup> .....	4,899,247	3,994,821	904,426
1993 <sup>3</sup> .....	5,099,220	4,144,067	955,153

<sup>1</sup> Details may not add to total due to rounding.

<sup>2</sup> Revised.

<sup>3</sup> Preliminary.

Source: "Air Carrier Traffic Statistics"—RSPA.

**TABLE 6.10**  
**OPERATING REVENUE OF DOMESTIC OPERATIONS, ALL SERVICES**  
**LARGE CERTIFICATED AIR CARRIERS**  
**MAJOR, NATIONAL, AND LARGE REGIONAL GROUPS**  
**1984-1993**  
(Thousands of Dollars)

Year	Total Operating Revenues <sup>1</sup>		Passenger		U.S. Mail (Including Subsidy)		Express and Freight		Excess Baggage		Other	
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
1984 .....	35,393,945	100.0	31,436,951	88.8	559,138	1.6	1,715,979	4.8	70,032	0.2	1,611,842	4.6
1985 .....	37,628,540	100.0	33,343,005	88.6	740,384	1.9	1,580,914	4.2	78,113	0.2	1,886,123	5.0
1986 .....	41,000,506	100.0	33,813,923	82.5	682,643	1.7	4,278,008	10.4	85,438	0.2	2,140,496	5.2
1987 .....	45,657,800	100.0	37,492,065	82.2	706,178	1.5	4,951,924	10.9	66,756	0.1	2,440,877	5.3
1988 .....	50,187,181	100.0	41,001,573	81.7	791,929	1.6	5,807,058	11.6	71,781	0.1	2,514,841	5.0
1989 .....	54,314,210	100.0	43,670,025	80.4	770,333	1.4	5,408,336	10.0	69,761	0.1	4,395,754	8.1
1990 .....	57,994,041	100.0	46,282,413	79.8	749,428	1.3	4,275,637	7.4	76,129	0.1	6,610,433	11.4
1991 .....	56,230,433	100.0	44,593,991	79.3	737,459	1.3	4,486,691	8.0	78,083	0.1	6,334,209	11.3
1992 <sup>2</sup> .....	57,654,393	100.0	45,245,648	78.5	939,991	1.6	4,655,268	8.1	87,354	0.2	6,726,132	11.7
1993 <sup>3</sup> .....	62,824,935	100.0	49,297,725	78.5	975,031	1.6	4,968,360	7.9	91,486	0.1	7,492,334	11.9

<sup>1</sup> Details may not add to total due to rounding.

<sup>2</sup> Revised.

<sup>3</sup> Preliminary.

Source: "Air Carrier Financial Statistics", Table 1—RSPA.

**TABLE 6.11**  
**OPERATING EXPENSES OF DOMESTIC OPERATIONS, ALL SERVICES**  
**LARGE CERTIFICATED AIR CARRIERS**  
**MAJOR, NATIONAL, AND LARGE REGIONAL GROUPS**  
**1984-1993**  
(Thousands of Dollars)

Year	Total Operating Expenses <sup>1</sup>		Aircraft Operating Expenses						Ground and Indirect Expense		Net Operating Income or Loss Amount
	Amount	Percent	Flight Operations		Maintenance		Depreciation and Amortization		Amount	Percent	
			Amount	Percent	Amount	Percent	Amount	Percent			
1984 .....	33,811,742	100.0	12,160,526	36.0	3,175,865	9.4	2,223,275	6.6	16,252,075	48.1	1,582,203
1985 .....	36,610,744	100.0	12,684,018	34.7	3,604,447	9.8	2,318,066	6.3	18,004,213	49.2	1,017,796
1986 .....	39,934,036	100.0	11,368,346	28.5	4,475,473	11.2	2,652,497	6.6	21,437,719	53.7	1,066,470
1987 .....	43,925,149	100.0	12,508,716	28.5	4,950,558	11.3	2,854,806	6.5	23,611,068	53.7	1,732,650
1988 .....	47,738,808	100.0	13,175,525	27.6	5,642,790	11.8	2,977,236	6.2	25,943,257	54.4	2,448,873
1989 .....	52,459,535	100.0	14,749,292	28.1	6,184,193	11.8	3,077,602	5.9	28,448,448	54.2	1,854,675
1990 .....	58,983,230	100.0	18,166,482	30.8	6,921,512	11.7	3,272,818	5.5	30,622,417	51.9	(989,189)
1991 .....	56,758,157	100.0	16,830,585	29.7	6,682,050	11.8	3,216,986	5.7	30,028,538	52.9	(527,724)
1992 <sup>2</sup> .....	58,801,107	100.0	17,203,047	29.3	6,883,543	11.7	3,339,621	5.7	31,374,896	53.4	(1,146,714)
1993 <sup>3</sup> .....	60,726,628	100.0	17,533,230	36.5	6,989,841	9.2	3,607,550	6.8	32,596,007	47.6	2,098,308

<sup>1</sup> Details may not add to total due to rounding.

<sup>2</sup> Revised.

<sup>3</sup> Preliminary.

Source: "Air Carrier Financial Statistics", Table 1—RSPA.

**TABLE 6.12**  
**OPERATING REVENUE OF INTERNATIONAL OPERATIONS, ALL SERVICES**  
**LARGE CERTIFICATED AIR CARRIERS**  
**MAJOR, NATIONAL, AND LARGE REGIONAL GROUPS**  
**1984-1993**  
(Thousands of Dollars)

Year	Total Operating Revenues <sup>1</sup>		Passenger		U.S. Mail (Including Subsidy)		Express and Freight		Excess Baggage		Other	
	Amount	Per-cent	Amount	Per-cent	Amount	Per-cent	Amount	Per-cent	Amount	Per-cent	Amount	Per-cent
1984 .....	7,974,706	100.0	6,074,406	76.2	157,703	2.0	1,169,259	14.8	27,447	0.3	545,892	6.8
1985 .....	8,302,279	100.0	6,451,324	77.7	160,543	1.9	1,130,050	13.6	27,832	0.3	531,528	6.4
1986 .....	8,621,149	100.0	6,550,550	76.0	153,627	1.8	1,451,488	16.8	28,254	0.3	437,231	5.1
1987 .....	10,924,837	100.0	8,374,295	76.7	180,052	1.6	1,782,832	16.3	32,688	0.3	554,971	5.1
1988 .....	13,401,710	100.0	10,356,637	77.3	183,251	1.4	2,150,132	16.0	39,285	0.3	672,405	5.0
1989 .....	14,910,912	100.0	11,181,198	75.0	188,284	1.3	2,416,980	16.2	46,759	0.3	1,077,692	7.3
1990 .....	17,990,355	100.0	13,467,960	74.9	223,840	1.2	2,601,668	14.5	43,244	0.2	1,653,644	9.2
1991 .....	18,928,061	100.0	14,102,721	74.5	222,833	1.2	3,134,202	16.6	49,584	0.3	1,418,721	7.5
1992 <sup>2</sup> .....	20,485,850	100.0	15,663,944	76.5	247,628	1.2	2,980,441	14.5	46,702	0.2	1,547,135	7.6
1993 <sup>3</sup> .....	20,969,851	100.0	15,909,921	75.9	237,201	1.1	3,173,381	15.1	49,410	0.2	1,599,937	7.6

<sup>1</sup> Details may not add to total due to rounding.

<sup>2</sup> Revised.

<sup>3</sup> Preliminary.

Source: "Air Carrier Financial Statistics", Table 1—RSPA.

**TABLE 6.13**  
**OPERATING EXPENSES OF INTERNATIONAL OPERATIONS, ALL SERVICES**  
**LARGE CERTIFICATED AIR CARRIERS**  
**MAJOR, NATIONAL, AND LARGE REGIONAL GROUPS**  
**1984-1993**  
(Thousands of Dollars)

Year	Total Operating Expenses¹		Aircraft Operating Expenses						Ground and Indirect Expense		Net Operating Income or Loss Amount
			Flight Operations		Maintenance		Depreciation and Amortization		Amount	Percent	
	Amount	Percent					Amount	Percent			
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent			
1984 .....	7,484,679	100.0	2,628,664	35.1	676,950	9.0	445,857	6.0	3,733,208	49.9	490,028
1985 .....	7,983,705	100.0	2,738,439	34.4	768,018	9.6	481,560	6.0	3,995,687	50.0	318,574
1986 .....	8,458,084	100.0	2,401,911	28.4	900,784	10.7	517,524	6.1	4,637,866	54.8	163,066
1987 .....	10,226,388	100.0	2,836,095	27.7	1,095,635	10.7	533,079	5.2	5,761,579	56.4	698,450
1988 .....	12,403,323	100.0	3,230,335	26.1	1,331,687	10.7	617,734	5.0	7,223,567	58.2	998,388
1989 .....	14,953,533	100.0	3,918,537	26.2	1,723,953	11.5	746,047	5.0	8,564,996	57.3	(42,620)
1990 .....	18,914,480	100.0	5,453,830	28.8	2,051,246	10.8	886,735	4.7	10,522,670	55.6	(924,123)
1991 .....	20,185,077	100.0	5,636,310	27.9	2,152,099	10.7	892,025	4.4	11,504,643	57.0	(1,257,016)
1992² .....	21,783,598	100.0	5,842,677	26.8	2,147,512	9.9	1,033,132	4.7	12,760,276	58.6	(1,297,748)
1993³ .....	21,631,934	100.0	5,903,332	27.3	1,965,431	9.1	1,074,696	5.0	12,688,476	58.7	(662,083)

<sup>1</sup> Details may not add to total due to rounding.

<sup>2</sup> Revised.

<sup>3</sup> Preliminary.

Source: "Air Carrier Financial Statistics", Table 1—RSPA.

**TABLE 6.14**  
**OPERATING REVENUE, SYSTEM, ALL SERVICES**  
**LARGE CERTIFICATED AIR CARRIERS**  
**MEDIUM REGIONAL GROUP**  
**1984-1993**  
(Thousands of Dollars)

Year	Total Operating Revenues <sup>1</sup>		Scheduled Passenger		Scheduled Other		Non Scheduled Service		Subsidy		Other Transport Related	
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
1984 .....	159,837	100.0	61,966	38.8	7,063	4.4	83,249	52.1	1,561	1.0	5,998	3.7
1985 .....	150,754	100.0	38,045	25.2	19,467	12.9	89,863	59.6	0	0.0	3,379	2.2
1986 .....	81,971	100.0	10,576	12.9	43	0.0	61,729	75.4	0	0.0	9,624	11.7
1987 .....	114,593	100.0	6,845	6.0	4,521	3.9	85,406	74.5	0	0.0	17,821	15.6
1988 .....	70,035	100.0	0	0.0	716	1.1	65,850	94.0	0	0.0	3,470	5.0
1989 .....	90,733	100.0	5,773	6.4	7,494	8.3	64,392	70.9	31	0.0	13,042	14.4
1990 .....	82,133	100.0	3,040	3.7	6,112	7.4	68,667	83.6	0	0.0	4,314	5.3
1991 .....	75,741	100.0	0	0.0	10,723	14.2	59,626	78.7	1,048	1.4	4,344	5.7
1992 <sup>2</sup> .....	216,797	100.0	15,543	7.2	4,634	2.1	188,005	86.7	1,228	0.6	7,386	3.4
1993 <sup>3</sup> .....	736,648	100.0	342,774	46.5	43,153	5.9	301,863	41.0	18,258	2.5	30,601	4.2

<sup>1</sup> Details may not add to total due to rounding.

<sup>2</sup> Revised.

<sup>3</sup> Preliminary.

Source: "Air Carrier Financial Statistics", Table 3—RSPA.

Note: Wide fluctuations in total revenues and expenses are caused by fluctuations in the number of medium regional carriers. Some have been upgraded to large regional carriers and some have gone out of business. For list of medium regional carriers see Air Carrier Financial Statistics for year in question.

**TABLE 6.15**  
**OPERATING EXPENSES, SYSTEM, ALL SERVICES**  
**LARGE CERTIFICATED AIR CARRIERS**  
**MEDIUM REGIONAL GROUP**  
**1984-1993**  
(Thousands of Dollars)

Year	Total Operating Expenses <sup>1</sup>		Flying Operations		Maintenance		General and Administrative		Depreciation and Amortization		Transport Related	
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
1983 .....	111,713	100.0	68,130	61.0	17,693	15.8	18,327	16.4	7,353	6.6	210	0.2
1984 .....	159,680	100.0	89,995	56.4	21,572	13.5	37,866	23.7	9,885	6.2	361	0.2
1985 .....	151,527	100.0	79,920	52.8	22,585	14.9	42,703	28.2	5,179	3.4	1,140	0.7
1986 .....	87,359	100.0	45,435	52.0	14,515	16.6	17,436	20.0	2,616	3.0	7,356	8.4
1987 .....	120,019	100.0	56,061	46.7	25,533	21.3	27,351	22.8	6,269	5.2	4,803	4.0
1988 .....	76,823	100.0	32,629	42.5	18,191	23.7	18,779	24.4	5,731	7.5	1,494	1.9
1989 .....	91,518	100.0	43,560	47.6	15,469	16.9	21,400	23.4	1,214	1.3	9,876	10.8
1990 .....	87,081	100.0	51,067	58.6	15,643	18.0	16,684	19.2	3,636	4.2	50	0.1
1991 .....	77,958	100.0	46,994	60.3	12,439	16.0	14,485	18.6	2,892	3.7	1,149	1.5
1992 <sup>2</sup> .....	218,594	100.0	129,486	59.2	43,051	19.7	36,005	16.5	8,309	3.8	1,743	0.8
1993 <sup>3</sup> .....	758,615	100.0	309,160	40.8	149,115	19.7	272,306	35.9	16,569	2.2	11,465	1.5

<sup>1</sup> Details may not add to total due to rounding.

<sup>2</sup> Revised.

<sup>3</sup> Preliminary.

Source: "Air Carrier Financial Statistics", Table 3—RSPA.

Note: Wide fluctuations in total revenues and expenses are caused by fluctuations in the number of medium regional carriers. Some have been upgraded to large regional carriers and some have gone out of business. For list of medium regional carriers see Air Carrier Financial Statistics for year in question.

**TABLE 6.16**  
**SMALL CERTIFICATED AND COMMUTER AIR CARRIERS**  
**1992 and 1993**

Action Airlines	Conquest Airlines	Metroflight
Advantage Airlines	Continental Express	Mohawk Airlines
Aerial Transit Company	Continental Micronesia	New England Airlines
Air Alpha	Crown Airways	New York Helicopter
Air Cape	Dawn Air	Northeast Express Regional
Air L. A.	Direct Air	Olson Air Service
Air Midwest, Inc.	Eclipse Airlines	Pacific Coast
Air Molakai	Ellis Air Taxi	Pacific Island
Air Nevada Airlines, Inc.	Empire Airlines	Paradise Island
Air Sedona	Empire Airways	Peninsula Airways
Air St. Thomas	ERA Aviation	Pennsylvania Airlines
Air Sunshine	Exec Express II	Piedmont Airlines
Air Vegas	Express Airlines I	Precision Valley Aviation
Air West Airlines	Express Airlines II	Promech
Airvantage	F.S. Air Service	Rader Aviation
Airways Int'l	Fine airlines, Inc.	Redwing Airways
Alaska Island Air	Flagship	Rocky Mountain Airways
Alliance Air	Flamenco Airways	Ross Aviation
Aloha Island Air	Florida Air	Ryan Air Service
Alpha Air	Four Star Aviation	Ryan Int'l
Alpine Air	Freedom Air	Samoa
Arizona Airways	Frontier Flying Service	Scenic Airlines
Arizona Pacific	GP Express	Sea Air Shuttle
Atlantic Coast Airlines	Grand Airways	Skagway Air Service
Atlantic Southeast Airlines	Grand Canyon Helicopters	Sky One Express
Aviation Associates	Great Lakes Aviation	Sky West Airlines
Aviation Services West	Gulf Air Taxi	Skybus Express
Baker Aviation	Gulfstream Int'l	Skymaster
Barrow Air	Hageland Aviation Service	Southcentral
Bellair	Haines Airways	Southeast Airlines
Bemidji Airlines	Harbor Air Service	Spirit Air Lines
Bering Air	Harbor Airlines	Springdale Air
Big Sky Airlines	Iliamna Air Taxi	Stateswest Airlines
Business Express Airlines	Island Express	Suburban Airlines
Cape Air	Jet Express	Tanana Air Service
Cape Smythe Air Service	Jetstream Int'l Airlines	Taquan Air Service
Casino Express	Kenmore Air Harbor	Tatonduk Flying Service
CCair	Ketchikan Air Service	Trans Air (Hawaii)
Chalks Int'l Airlines	L.A.B. Flying Service	Trans World Express
Chapter One	Lake Union Air Services	Ultrair
Chautaugua Airlines	Larry's Flying Service	Vieques Air Link
Chicago Express Airlines	Las Vegas Air Lines	Village Aviation
Christman Air System	Loken Aviation	Walker's International
Coastal Air Transport	Long Island Airlines	Warbelow's Air Ventures
Colgan Air	Markair Express	Ward Air
Comair	Mesa Airlines	West Isle Air
Commutair	Mesaba Airlines	Westair Airlines



**TABLE 6.17**  
**SMALL CERTIFICATED, COMMUTER AND LARGE CERTIFICATED MEDIUM REGIONAL**  
**AIR CARRIERS TRAFFIC DATA**  
**SCHEDULED SERVICES ONLY**  
**1984-1993**

Category	1984	1985	1986	1987	1988	1989	1990	1991	1992 <sup>1</sup>	1993 <sup>2</sup>
Revenue Passenger Miles (000) .....	4,601,837	3,031,817	3,352,187	3,986,637	4,582,522	5,052,222	5,875,960	6,022,536	7,189,150	10,322,502
Revenue Enplanements (000) .....	20,230	18,853	20,849	24,839	27,801	29,612	33,491	32,713	36,515	39,044
Passenger Ton Miles (000) .....	460,135	302,783	335,264	396,887	456,894	456,794	586,266	599,521	716,916	1,029,879
Cargo Ton Miles (000) .....	18,291	67,400	49,927	54,659	6,333	43,031	67,693	26,533	15,662	87,046
Aircraft Revenue Miles (000) .....	304,217	323,945	347,181	395,998	437,818	546,652	612,018	522,536	582,391	642,988
Aircraft Revenue Hours .....	1,759,848	1,832,623	1,940,095	2,193,230	2,389,988	2,589,223	3,016,836	2,704,553	2,914,350	3,032,608
Aircraft Departures .....	2,706,142	2,755,616	2,866,653	3,132,899	3,323,772	3,284,610	3,624,162	3,495,284	3,670,095	3,829,630

<sup>1</sup> Preliminary.

<sup>2</sup> Revised.

Source: "Air Carrier Industry Scheduled Traffic Statistics", RSPA.

**TABLE 6.18**  
**SMALL CERTIFICATED, COMMUTER AND LARGE CERTIFICATED**  
**MEDIUM REGIONAL AIR CARRIERS**  
**TRAFFIC AVERAGES**  
**SCHEDULED SERVICES ONLY**  
**1984-1993**

Category	1984	1985	1986	1987	1988	1989	1990	1991	1992 <sup>2</sup>	1993 <sup>1</sup>
Passengers Per Aircraft Mile .....	15.1	9.4	9.7	10.1	10.5	9.2	9.9	11.5	12.3	16.1
Available Seats Per Aircraft Mile .....	30.0	21.3	21.5	21.8	22.6	19.5	20.9	24.6	25.3	31.4
Revenue Tons Per Aircraft Mile .....	1.6	1.1	1.1	1.1	1.1	1.0	1.2	1.2	1.3	1.7
Available Tons Per Aircraft Mile .....	3.3	2.7	2.5	2.7	2.4	2.2	2.4	2.7	2.7	3.7
Flight Stage Length (Miles) .....	112.3	117.6	128.7	126.4	131.7	165.5	168.9	149.5	158.7	167.9

<sup>1</sup> Preliminary.

<sup>2</sup> Revised.

Source: "Air Carrier Industry Scheduled Traffic Statistics", RSPA.

## **VII. U.S. CIVIL AIRMEN**

Statistics pertaining to airmen, both pilot and nonpilot, were obtained from the official airmen certification records maintained by the Airmen Certification and Medical Certification Branches of the Mike Monroney Aeronautical Center at Oklahoma City, Oklahoma.

Active pilots are those pilots who hold a pilot certificate and a valid medical certificate—one that was issued within the last 25 months. Glider pilots may have, but are not required to have, a medical examination. The inventory data for this category includes only those with a valid medical certificate.

For those nonpilot certificates for which a medical certificate is not required (mechanics, parachute riggers, ground instructors, and dispatchers), the numbers shown include all who have been issued that airman certificate.

**TABLE 7.1**  
**ESTIMATED ACTIVE AIRMEN CERTIFICATES HELD**  
**DECEMBER 31, 1984-1993**

Category	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
<b>Pilot—Total</b> .....	<b>722,376</b>	<b>709,540</b>	<b>709,118</b>	<b>699,653</b>	<b>694,016</b>	<b>700,010</b>	<b>702,659</b>	<b>692,095</b>	<b>682,959</b>	<b>665,069</b>
Student <sup>1</sup> .....	150,081	146,652	150,273	146,016	136,913	142,544	128,663	120,203	114,597	103,583
Recreational <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	N/A	87	161	187	206
Airplane <sup>2</sup> .....										
Private .....	320,086	311,086	305,736	300,949	299,786	293,179	299,111	293,306	288,078	283,700
Commercial .....	155,929	151,632	147,798	143,645	143,030	144,540	149,666	148,365	146,385	143,014
Airline Transport .....	79,192	82,740	87,186	91,287	96,968	102,087	107,732	112,167	115,855	117,070
Helicopter (only) <sup>3</sup> .....	7,532	8,123	8,581	8,702	8,608	8,863	9,567	9,860	9,652	9,168
Glider (only) <sup>4,5</sup> .....	8,390	8,168	8,411	7,901	7,600	7,708	7,833	8,033	8,205	8,328
Lighter-than-air <sup>5,6</sup> .....	1,166	1,139	1,133	1,153	1,111	1,089	<sup>6</sup>	<sup>6</sup>	<sup>6</sup>	<sup>6</sup>
<b>Flight Instructor Certificates <sup>7</sup></b> .....	<b>61,173</b>	<b>58,940</b>	<b>57,355</b>	<b>60,316</b>	<b>61,798</b>	<b>61,472</b>	<b>63,775</b>	<b>69,209</b>	<b>72,148</b>	<b>75,021</b>
<b>Instrument Ratings <sup>7,8</sup></b> .....	<b>256,584</b>	<b>258,559</b>	<b>262,388</b>	<b>266,122</b>	<b>273,804</b>	<b>282,804</b>	<b>297,073</b>	<b>303,193</b>	<b>306,169</b>	<b>305,517</b>
<b>Nonpilot—Total</b> .....	<b>426,802</b>	<b>395,139</b>	<b>410,079</b>	<b>427,962</b>	<b>448,710</b>	<b>468,405</b>	<b>492,237</b>	<b>517,462</b>	<b>540,548</b>	<b>559,726</b>
Mechanic <sup>9</sup> .....	298,028	274,100	284,241	297,178	312,419	326,243	344,282	366,392	384,669	401,060
Parachute Rigger <sup>9</sup> .....	10,194	9,395	9,535	9,659	9,770	9,879	10,094	7,916	8,163	8,417
Ground Instructor <sup>9</sup> .....	67,463	58,214	59,443	60,861	62,582	64,503	66,882	70,086	73,276	76,050
Dispatcher <sup>9</sup> .....	8,980	8,511	9,025	9,491	10,020	10,455	11,002	11,607	12,264	12,883
Flight Navigator .....	1,603	1,542	1,512	1,445	1,400	1,357	1,290	1,225	1,154	1,039
Flight Engineer .....	40,534	43,377	46,323	49,328	52,519	55,968	58,687	60,236	61,022	60,277

<sup>1</sup> Category of certificate unknown.

<sup>2</sup> Includes pilots with an airplane only certificate. Also includes those with an airplane and a helicopter and/or glider certificate.

<sup>3</sup> See table 7 for the total number of pilots with a helicopter certificate.

<sup>4</sup> See table 8 for the total number of pilots with a glider certificate.

<sup>5</sup> Glider and lighter-than-air pilots are not required to have a medical examination; however, the totals above represent pilots who received a medical examination within the last 25 months.

<sup>6</sup> Lighter-than-air type ratings are no longer being issued.

<sup>7</sup> Not included in total.

<sup>8</sup> Special ratings shown on pilot certificates, do not indicate additional certificates.

<sup>9</sup> Numbers represent all certificates on record. No medical examination required.

N/A Not available. Recreational certificate first issued in 1990.

**TABLE 7.2**  
**ESTIMATED ACTIVE WOMEN AIRMEN CERTIFICATES HELD**  
**DECEMBER 31, 1984-1993**

Category	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
<b>Pilot—Total</b> .....	<b>44,339</b>	<b>43,483</b>	<b>43,082</b>	<b>42,578</b>	<b>42,299</b>	<b>42,366</b>	<b>40,515</b>	<b>40,931</b>	<b>40,620</b>	<b>39,460</b>
Student <sup>1</sup> .....	19,435	19,058	18,899	18,367	17,529	17,637	15,007	14,501	13,921	12,788
Recreational <sup>1</sup> .....	N/A	N/A	N/A	N/A	N/A	N/A	6	15	10	17
Airplane <sup>2</sup> .....										
Private .....	18,616	17,974	17,532	17,349	17,544	16,988	17,301	17,514	17,276	16,997
Commercial .....	4,232	4,185	4,176	4,208	4,410	4,760	5,210	5,652	5,918	5,981
Airline Transport .....	1,032	1,184	1,334	1,538	1,745	1,898	2,082	2,308	2,530	2,738
Helicopter (only) .....	167	196	232	247	259	273	292	307	313	276
Glider (only) <sup>3</sup> .....	631	653	667	627	590	586	617	634	652	663
Lighter-than-air <sup>3,4</sup> .....	226	233	242	242	222	224	<sup>4</sup>	<sup>4</sup>	<sup>4</sup>	<sup>4</sup>
<b>Flight Instructor Certificates</b> <sup>5</sup> .....	<b>2,736</b>	<b>2,731</b>	<b>2,687</b>	<b>2,909</b>	<b>3,018</b>	<b>3,074</b>	<b>3,239</b>	<b>3,629</b>	<b>3,964</b>	<b>4,338</b>
<b>Nonpilot—Total</b> .....	<b>6,591</b>	<b>6,017</b>	<b>6,502</b>	<b>7,101</b>	<b>7,842</b>	<b>10,683</b>	<b>9,557</b>	<b>10,324</b>	<b>11,514</b>	<b>12,363</b>
Mechanic <sup>6</sup> .....	1,649	1,775	1,964	2,237	2,565	2,892	3,333	3,901	4,398	4,839
Parachute Rigger <sup>6</sup> .....	614	412	414	428	441	451	474	363	390	413
Ground Instructor <sup>6</sup> .....	3,680	2,980	3,087	3,232	3,391	3,554	3,760	3,952	4,338	4,615
Dispatcher <sup>6</sup> .....	310	394	460	524	622	711	802	852	1,004	1,083
Flight Navigator .....	2	1	0	0	1	1	0	0	0	0
Flight Engineer .....	336	455	577	680	822	3,074	1,188	1,256	1,384	1,413

<sup>1</sup> Category of certificate unknown.

<sup>2</sup> Includes pilots with an airplane only certificate. Also includes those with an airplane and a helicopter and/or glider certificate.

<sup>3</sup> Glider and lighter-than-air pilots are not required to have a medical examination; however, the totals above represent pilots who received a medical examination within the last 25 months.

<sup>4</sup> Lighter-than-air type ratings are no longer being issued.

<sup>5</sup> Not included in total.

<sup>6</sup> Numbers represent all certificates on record. No medical examination required.

N/A Not available. Recreational certificate first issued in 1990.

**TABLE 7.3**  
**ESTIMATED ACTIVE PILOT CERTIFICATES HELD,**  
**BY CLASS OF CERTIFICATE AND BY FAA REGION**  
**DECEMBER 31, 1993**

Class of Certificate	Total <sup>1</sup>	Alaskan	Central	Eastern	Great Lakes	New England	North-west Mountain	Southern	South-west	Western Pacific	Outside U.S. <sup>2</sup>
<b>Total—All Pilots</b> .....	<b>665,069</b>	<b>9,472</b>	<b>32,395</b>	<b>84,777</b>	<b>108,687</b>	<b>29,922</b>	<b>65,885</b>	<b>117,860</b>	<b>76,627</b>	<b>110,854</b>	<b>28,590</b>
<b>Student<sup>3</sup></b> .....	<b>103,583</b>	<b>1,124</b>	<b>4,862</b>	<b>14,733</b>	<b>17,736</b>	<b>4,860</b>	<b>9,950</b>	<b>18,065</b>	<b>11,311</b>	<b>16,394</b>	<b>4,548</b>
<b>Recreational<sup>3</sup></b> .....	<b>206</b>	<b>1</b>	<b>13</b>	<b>46</b>	<b>57</b>	<b>17</b>	<b>11</b>	<b>39</b>	<b>11</b>	<b>7</b>	<b>4</b>
<b>Airplane<sup>4</sup></b> .....											
<b>Private—Total</b> .....	<b>283,700</b>	<b>4,293</b>	<b>16,358</b>	<b>36,450</b>	<b>52,436</b>	<b>13,595</b>	<b>28,483</b>	<b>45,635</b>	<b>30,767</b>	<b>49,077</b>	<b>6,606</b>
Private Airplane (only) .....	272,382	4,164	15,899	34,856	51,048	13,075	27,295	43,704	29,613	46,728	6,000
Private Airplane, Private Glider .....	4,014	34	147	639	602	186	415	628	400	865	98
Private Airplane, Commercial Glider .....	920	4	20	174	137	72	125	103	78	197	10
Private Airplane, Private Gyroplane .....	25	0	1	0	6	2	4	5	4	3	0
Private Airplane, Private Helicopter .....	1,792	19	67	215	192	100	173	242	162	420	202
Private Airplane, Private Glider, Private Helicopter .....	67	0	1	13	10	5	4	7	5	16	6
Private Airplane, Commercial Helicopter .....	4,446	71	222	546	439	153	464	928	503	834	288
Private Airplane, Private Glider, Commercial Helicopter .....	31	1	1	4	0	1	2	8	1	10	3
Private Airplane, Commercial Glider, Commercial Helicopter .....	16	0	0	3	1	1	0	5	1	4	1
Private Airplane, Commercial Gyroplane, Commercial Helicopter .....	7	0	0	0	1	0	1	5	0	0	0
<b>Commercial—Total</b> .....	<b>143,014</b>	<b>2,451</b>	<b>6,841</b>	<b>17,182</b>	<b>21,827</b>	<b>5,559</b>	<b>13,611</b>	<b>25,976</b>	<b>17,415</b>	<b>22,585</b>	<b>9,567</b>
Commercial Airplane (only) .....	123,967	2,133	5,994	14,630	19,643	4,847	11,596	21,858	15,100	18,983	9,183
Commercial Airplane, Private Glider .....	1,976	29	92	297	302	79	209	341	216	384	27
Commercial Airplane, Commercial Glider .....	3,560	32	136	550	475	202	462	603	376	688	36
Commercial Airplane, Commercial Gyroplane, Commercial Glider .....	3	0	1	0	1	0	0	0	0	1	0
Commercial Airplane, Private Helicopter .....	465	9	25	57	62	21	37	76	46	105	27
Commercial Airplane, Commercial Glider, Private Helicopter .....	29	0	1	3	6	2	1	4	4	7	1
Commercial Airplane, Commercial Helicopter .....	12,303	237	562	1,550	1,261	368	1,228	2,957	1,605	2,255	280
Commercial Airplane, Private Glider, Commercial Helicopter .....	157	1	4	24	22	9	21	32	12	27	5
Commercial Airplane, Commercial Glider, Commercial Helicopter .....	487	8	22	68	46	29	52	87	48	122	5
Commercial Airplane, Commercial Helicopter, Commercial Gyroplane .....	25	0	0	2	3	0	2	8	1	6	3
Commercial Airplane, Commercial Gyroplane .....	30	2	3	1	4	2	2	8	4	4	0
Commercial Airplane, Commercial Gyroplane, Commercial Helicopter .....	12	0	1	0	2	0	1	2	3	3	0
Commercial Glider .....	12	0	1	0	2	0	1	2	3	3	0
<b>Airline Transport—Total</b> .....	<b>117,070</b>	<b>1,475</b>	<b>3,894</b>	<b>13,465</b>	<b>14,909</b>	<b>4,958</b>	<b>12,250</b>	<b>25,596</b>	<b>15,453</b>	<b>18,569</b>	<b>6,501</b>
Airline Transport Airplane (only) .....	114,863	1,408	3,840	13,092	14,718	4,828	12,060	25,117	15,109	18,268	6,423
Airline Transport Airplane, Airline Transport Helicopter .....	2,207	67	54	373	191	130	190	479	344	301	78
<b>Rotorcraft (only)<sup>5</sup>—Total</b> .....	<b>9,168</b>	<b>113</b>	<b>281</b>	<b>1,196</b>	<b>725</b>	<b>417</b>	<b>703</b>	<b>1,805</b>	<b>1,016</b>	<b>1,761</b>	<b>1,151</b>
Private Gyroplane .....	17	0	1	0	7	2	1	1	2	1	2
Private Helicopter .....	1,933	7	34	214	144	167	110	195	88	533	441
Commercial Helicopter .....	6,684	88	238	905	542	231	550	1,518	813	1,174	625
Commercial Helicopter, Private Glider .....	5	0	0	3	1	0	0	0	0	1	0
Commercial Helicopter, Commercial Glider .....	6	0	0	2	0	0	0	1	1	2	0
Commercial Gyroplane .....	2	0	0	0	1	0	0	0	0	0	1
Commercial Helicopter, Commercial Gyroplane .....	2	0	1	0	0	0	0	0	1	0	0
Airline Transport Helicopter .....	519	18	7	72	30	17	42	90	111	50	82
<b>Glider only<sup>6,7</sup>—Total</b> .....	<b>8,328</b>	<b>15</b>	<b>146</b>	<b>1,705</b>	<b>997</b>	<b>516</b>	<b>877</b>	<b>744</b>	<b>654</b>	<b>2,461</b>	<b>213</b>
Private Glider .....	7,210	10	127	1,445	860	430	741	645	566	2,204	182
Commercial Glider .....	1,118	5	19	260	137	86	136	99	88	257	31
<b>Flight Instructor Certificates<sup>8</sup></b> .....	<b>75,021</b>	<b>984</b>	<b>3,573</b>	<b>10,388</b>	<b>12,614</b>	<b>3,335</b>	<b>7,450</b>	<b>13,223</b>	<b>9,083</b>	<b>12,312</b>	<b>2,059</b>
<b>Instrument Ratings<sup>9</sup></b> .....	<b>305,517</b>	<b>4,027</b>	<b>13,196</b>	<b>38,011</b>	<b>46,093</b>	<b>12,978</b>	<b>29,374</b>	<b>60,279</b>	<b>37,297</b>	<b>48,908</b>	<b>15,354</b>

<sup>1</sup> Includes Outside U.S. total.

<sup>2</sup> Outside U.S. Includes airmen certificated by the FAA who live outside the 50 states or foreign countries.

<sup>3</sup> Category of certificate unknown.

<sup>4</sup> Includes pilots with an airplane only certificate. Also includes those with an airplane and a helicopter and/or glider certificate.

<sup>5</sup> See table 7 for the total number of pilots with a helicopter certificate.

<sup>6</sup> See table 8 for the total number of pilots with a glider certificate.

<sup>7</sup> Glider pilots are not required to have a medical examination; however, the totals above represent pilots who received a medical examination within the last 25 months.

<sup>8</sup> Not included in total.

<sup>9</sup> Special ratings shown on pilot certificates, do not indicate additional certificates.

**TABLE 7.4**  
**ESTIMATED ACTIVE PILOT CERTIFICATES HELD**  
**BY CLASS OF CERTIFICATE**  
**DECEMBER 31, 1984-1993**

Class of Certificate	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984
<b>Total—All Pilots</b> .....	<b>665,069</b>	<b>682,959</b>	<b>692,095</b>	<b>702,659</b>	<b>700,010</b>	<b>694,016</b>	<b>699,653</b>	<b>709,118</b>	<b>709,540</b>	<b>722,376</b>
<b>Student<sup>1</sup>—Total</b> .....	<b>103,583</b>	<b>114,597</b>	<b>120,203</b>	<b>128,663</b>	<b>142,544</b>	<b>136,913</b>	<b>146,016</b>	<b>150,273</b>	<b>146,652</b>	<b>150,081</b>
<b>Recreational<sup>1</sup></b> .....	<b>206</b>	<b>187</b>	<b>161</b>	<b>87</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
<b>Airplane<sup>2</sup></b> .....	<b>283,700</b>	<b>288,078</b>	<b>293,306</b>	<b>299,111</b>	<b>293,179</b>	<b>299,786</b>	<b>300,949</b>	<b>305,736</b>	<b>311,086</b>	<b>320,086</b>
<b>Private—Total</b> .....	<b>272,382</b>	<b>276,713</b>	<b>282,047</b>	<b>288,035</b>	<b>282,540</b>	<b>289,318</b>	<b>290,694</b>	<b>295,607</b>	<b>301,021</b>	<b>310,207</b>
Private Airplane (only) .....	4,014	4,030	4,113	4,144	4,049	4,059	4,105	4,144	4,234	4,347
Private Airplane, Private Glider .....	920	893	878	841	807	799	795	772	767	754
Private Airplane, Commercial Glider .....	25	28	20	22	31	26	29	25	29	30
Private Airplane, Private Gyroplane .....	1,792	1,731	1,722	1,592	1,459	1,392	1,316	1,288	1,236	1,206
Private Airplane, Private Helicopter .....	67	68	71	67	58	60	55	47	48	48
Private Airplane, Commercial Helicopter .....	4,446	4,561	4,405	4,357	4,186	4,081	3,904	3,805	3,713	3,457
Private Airplane, Private Glider, Commercial Helicopter .....	31	37	35	36	30	32	37	33	21	21
Private Airplane, Commercial Glider, Commercial Helicopter .....	16	15	14	15	17	17	12	14	16	15
Private Airplane, Commercial Gyroplane, Commercial Helicopter .....	7	2	1	2	2	2	2	1	1	1
<b>Commercial—Total</b> .....	<b>143,014</b>	<b>146,385</b>	<b>148,365</b>	<b>149,666</b>	<b>144,540</b>	<b>143,030</b>	<b>143,645</b>	<b>147,798</b>	<b>151,632</b>	<b>155,929</b>
Commercial Airplane (only) .....	123,967	126,797	128,207	128,628	123,612	121,819	121,934	125,235	128,749	132,668
Commercial Airplane, Private Glider .....	1,976	2,055	2,072	2,081	2,057	2,063	2,070	2,148	2,164	2,186
Commercial Airplane, Commercial Glider .....	3,560	3,630	3,645	3,776	3,685	3,703	3,777	3,983	4,073	4,149
Commercial Airplane, Commercial Gyroplane, Commercial Glider .....	3	1	2	2	3	2	1	1	1	3
Commercial Airplane, Private Helicopter .....	465	401	379	348	325	302	274	262	245	248
Commercial Airplane, Commercial Glider, Private Helicopter .....	29	27	26	28	27	24	18	16	19	16
Commercial Airplane, Commercial Helicopter .....	12,303	12,767	13,316	14,036	14,085	14,346	14,778	15,335	15,550	15,817
Commercial Airplane, Private Glider, Commercial Helicopter .....	157	149	146	163	154	150	152	156	162	154
Commercial Airplane, Commercial Glider, Commercial Helicopter .....	487	509	518	543	535	562	587	609	614	632
Commercial Airplane, Commercial Helicopter, Commercial Gyroplane .....	25	18	19	20	19	22	20	23	25	25
Commercial Airplane, Commercial Gyroplane .....	30	20	25	31	27	24	24	21	23	24
Commercial Airplane, Commercial Gyroplane, Commercial Helicopter .....	12	11	10	10	11	13	10	9	7	7
<b>Airline Transport—Total</b> .....	<b>117,070</b>	<b>115,855</b>	<b>112,167</b>	<b>107,732</b>	<b>102,087</b>	<b>96,968</b>	<b>91,287</b>	<b>87,186</b>	<b>82,740</b>	<b>79,192</b>
Airline Transport Airplane (only) .....	114,863	113,692	110,131	105,830	100,317	95,282	89,694	85,714	81,367	77,921
Airline Transport Airplane, Airline Transport Helicopter .....	2,207	2,163	2,036	1,902	1,770	1,686	1,593	1,472	1,373	1,271
<b>Rotorcraft (only)<sup>3</sup>—Total</b> .....	<b>9,168</b>	<b>9,652</b>	<b>9,860</b>	<b>9,567</b>	<b>8,863</b>	<b>8,608</b>	<b>8,702</b>	<b>8,581</b>	<b>8,123</b>	<b>7,532</b>
Private Gyroplane .....	17	16	15	11	12	15	10	9	5	6
Private Helicopter .....	1,933	1,917	1,864	1,572	1,264	1,143	1,019	892	808	712
Commercial Helicopter .....	6,684	7,199	7,469	7,524	7,116	6,997	7,228	7,230	6,862	6,415
Commercial Helicopter, Private Glider .....	5	5	7	4	6	7	5	6	5	2
Commercial Helicopter, Commercial Glider .....	6	4	2	3	2	4	5	6	9	9
Commercial Gyroplane .....	2	1	1	2	1	0	1	1	0	0
Commercial Helicopter, Commercial Gyroplane .....	2	2	2	2	1	2	1	2	2	1
Airline Transport Helicopter .....	519	508	500	449	461	440	433	435	432	387
<b>Glider (only)<sup>4,5</sup>—Total</b> .....	<b>8,328</b>	<b>8,205</b>	<b>8,033</b>	<b>7,833</b>	<b>7,708</b>	<b>7,600</b>	<b>7,901</b>	<b>8,411</b>	<b>8,168</b>	<b>8,390</b>
Private Glider .....	7,210	7,090	6,929	6,773	6,652	6,528	6,734	7,168	7,000	6,971
Commercial Glider .....	1,118	1,115	1,104	1,060	1,056	1,072	1,167	1,243	1,168	1,419
<b>Lighter-Than-Air<sup>6</sup></b> .....	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>1,089</b>	<b>1,111</b>	<b>1,153</b>	<b>1,133</b>	<b>1,139</b>	<b>1,166</b>
<b>Flight Instructor Certificates<sup>7</sup></b> .....	<b>75,021</b>	<b>72,148</b>	<b>69,209</b>	<b>63,775</b>	<b>61,472</b>	<b>61,798</b>	<b>60,316</b>	<b>57,355</b>	<b>58,940</b>	<b>61,173</b>
<b>Instrument Ratings<sup>7,8</sup></b> .....	<b>305,517</b>	<b>306,169</b>	<b>303,193</b>	<b>297,073</b>	<b>282,804</b>	<b>273,804</b>	<b>266,122</b>	<b>262,388</b>	<b>258,559</b>	<b>256,584</b>

<sup>1</sup> Category of certificate unknown.

<sup>2</sup> Includes pilots with an airplane only certificate. Also includes those with an airplane and a helicopter and/or glider certificate.

<sup>3</sup> See table 7 for the total number of pilots with a helicopter certificate.

<sup>4</sup> See table 8 for the total number of pilots with a glider certificate.

<sup>5</sup> Glider and lighter-than-air pilots are not required to have a medical examination; however, the totals above represent pilots who received a medical examination within the last 25 months.

<sup>6</sup> Lighter-than-air type ratings are no longer being issued.

<sup>7</sup> Not included in total.

<sup>8</sup> Special ratings shown on pilot certificates, do not indicate additional certificates.

N/A Not available. Recreational certificate first issued in 1990.

**TABLE 7.5**  
**ESTIMATED ACTIVE PILOTS AND FLIGHT INSTRUCTORS**  
**BY FAA REGION AND STATE**  
**DECEMBER 31, 1993**

FAA Region and State	Total Pilots	Students <sup>1</sup>	Airplane <sup>2</sup>			Misc. <sup>3</sup>	Flight Instructor <sup>4</sup>
			Private	Commercial	Airline Transport		
<b>Total <sup>5</sup></b> .....	<b>665,069</b>	<b>103,583</b>	<b>283,700</b>	<b>143,014</b>	<b>117,070</b>	<b>17,702</b>	<b>75,021</b>
<b>United States—Total</b> .....	<b>636,479</b>	<b>99,035</b>	<b>277,094</b>	<b>133,447</b>	<b>110,569</b>	<b>16,334</b>	<b>72,962</b>
<b>Alaskan Region—Total</b> .....	<b>9,472</b>	<b>1,124</b>	<b>4,293</b>	<b>2,451</b>	<b>1,475</b>	<b>129</b>	<b>984</b>
<b>Central Region—Total</b> .....	<b>32,395</b>	<b>4,862</b>	<b>16,358</b>	<b>6,841</b>	<b>3,894</b>	<b>440</b>	<b>3,573</b>
Iowa .....	6,633	1,024	3,665	1,330	549	65	726
Kansas .....	8,867	1,224	4,546	1,950	1,027	120	988
Missouri .....	12,146	1,899	5,698	2,443	1,882	224	1,415
Nebraska .....	4,749	715	2,449	1,118	436	31	444
<b>Eastern Region—Total</b> .....	<b>84,777</b>	<b>14,733</b>	<b>36,450</b>	<b>17,182</b>	<b>13,465</b>	<b>2,947</b>	<b>10,388</b>
Delaware .....	1,612	259	657	336	315	45	248
District of Columbia .....	544	105	232	123	51	33	51
Maryland .....	9,435	1,517	4,282	1,871	1,450	315	1,150
New Jersey .....	13,105	2,317	5,697	2,427	2,201	463	1,597
New York .....	21,244	4,144	9,495	4,192	2,423	990	2,552
Pennsylvania .....	20,461	3,461	9,102	3,898	3,454	546	2,643
Virginia .....	15,120	2,301	5,521	3,616	3,244	438	1,835
West Virginia .....	2,357	415	1,196	459	228	59	241
Armed Forces Europe <sup>6</sup> .....	899	214	268	260	99	58	71
<b>Great Lakes Region—Total</b> .....	<b>108,687</b>	<b>17,736</b>	<b>52,436</b>	<b>21,827</b>	<b>14,909</b>	<b>1,779</b>	<b>12,614</b>
Illinois .....	24,019	3,934	10,582	4,828	4,227	448	3,067
Indiana .....	12,051	2,048	6,054	2,380	1,414	155	1,372
Michigan .....	18,731	3,212	9,464	3,525	2,125	405	2,150
Minnesota .....	16,342	2,459	7,622	3,414	2,644	203	1,856
North Dakota .....	3,098	425	1,481	998	171	23	324
Ohio .....	20,288	3,319	9,908	4,013	2,643	405	2,382
South Dakota .....	2,397	389	1,148	576	265	19	233
Wisconsin .....	11,761	1,950	6,177	2,093	1,420	121	1,230
<b>New England Region—Total</b> .....	<b>29,922</b>	<b>4,860</b>	<b>13,595</b>	<b>5,559</b>	<b>4,958</b>	<b>950</b>	<b>3,335</b>
Connecticut .....	7,672	1,147	3,217	1,361	1,692	255	848
Maine .....	3,626	660	1,761	757	401	47	342
Massachusetts .....	11,028	1,919	5,354	2,018	1,295	442	1,250
New Hampshire .....	4,472	597	1,776	830	1,166	103	558
Rhode Island .....	1,410	241	697	267	170	35	150
Vermont .....	1,714	296	790	326	234	68	187
<b>Northwest Mountain Region—Total</b> .....	<b>65,885</b>	<b>9,950</b>	<b>28,483</b>	<b>13,611</b>	<b>12,250</b>	<b>1,591</b>	<b>7,450</b>
Colorado .....	17,049	2,407	6,387	3,636	4,123	496	2,360
Idaho .....	4,575	692	2,286	976	527	94	421
Montana .....	3,831	557	1,921	932	372	49	397
Oregon .....	10,257	1,602	5,309	2,106	973	267	1,080
Utah .....	6,165	1,086	2,605	1,104	1,248	122	606
Washington .....	22,115	3,356	8,984	4,475	4,770	530	2,390
Wyoming .....	1,893	250	991	382	237	33	196
<b>Southern Region—Total</b> .....	<b>117,860</b>	<b>18,065</b>	<b>45,635</b>	<b>25,976</b>	<b>25,596</b>	<b>2,588</b>	<b>13,223</b>
Alabama .....	8,205	1,484	3,451	1,978	902	390	1,024
Florida .....	47,309	6,675	17,800	11,278	10,786	770	5,714
Georgia .....	17,812	2,568	6,207	3,464	5,247	326	1,731
Kentucky .....	6,274	1,111	2,542	1,106	1,363	152	657
Mississippi .....	4,394	798	1,732	1,288	463	113	448
North Carolina .....	14,599	2,295	6,044	2,957	2,925	378	1,485
South Carolina .....	6,484	1,109	2,830	1,497	913	135	633
Tennessee .....	12,656	1,998	4,998	2,373	2,980	307	1,517
Armed Forces Europe <sup>6</sup> .....	127	27	31	35	17	17	14
<b>Southwest Region—Total</b> .....	<b>76,627</b>	<b>11,311</b>	<b>30,767</b>	<b>17,415</b>	<b>15,453</b>	<b>1,681</b>	<b>9,083</b>
Arkansas .....	5,573	932	2,502	1,449	612	78	562
Louisiana .....	7,136	1,143	2,723	2,027	975	268	860
New Mexico .....	4,676	676	2,055	1,128	679	138	565
Oklahoma .....	9,956	1,803	4,652	2,248	1,128	125	1,210
Texas .....	49,286	6,757	18,835	10,563	12,059	1,072	5,886

**TABLE 7.5—Continued**  
**ESTIMATED ACTIVE PILOTS AND FLIGHT INSTRUCTORS**  
**BY FAA REGION AND STATE**  
**DECEMBER 31, 1993**

FAA Region and State	Total Pilots	Students <sup>1</sup>	Airplane <sup>2</sup>			Misc. <sup>3</sup>	Flight Instructor <sup>4</sup>
			Private	Commercial	Airline Transport		
<b>Western-Pacific Region—Total .....</b>	<b>110,854</b>	<b>16,394</b>	<b>49,077</b>	<b>22,585</b>	<b>18,569</b>	<b>4,229</b>	<b>12,312</b>
Arizona .....	15,324	2,198	6,124	3,350	3,129	523	2,172
California .....	85,972	12,800	39,708	17,265	12,936	3,263	9,025
Hawaii .....	3,088	446	840	689	863	250	360
Nevada .....	5,703	685	2,192	1,088	1,576	162	707
Armed Forces Pacific <sup>6</sup> .....	767	265	213	193	65	31	48
<b>Outside U. S.—Total<sup>7</sup> .....</b>	<b>28,590</b>	<b>4,548</b>	<b>6,606</b>	<b>9,567</b>	<b>6,501</b>	<b>1,368</b>	<b>2,059</b>
<b>Other U. S. Areas: .....</b>	<b>2,139</b>	<b>600</b>	<b>645</b>	<b>387</b>	<b>433</b>	<b>74</b>	<b>0</b>
American Samoa .....	10	0	2	3	4	1	0
Canal Zone .....	1	0	0	0	1	0	0
Guam .....	230	49	39	40	95	7	0
Puerto Rico .....	1,600	480	491	290	275	64	0
Virgin Islands .....	297	71	112	54	58	2	0
Wake Island .....	1	0	1	0	0	0	0

<sup>1</sup> Category of certificate unknown.

<sup>2</sup> Includes pilots with an airplane only certificate. Also includes those with an airplane and a helicopter and/or glider certificate.

<sup>3</sup> Includes helicopter, glider, and recreational.

<sup>4</sup> Not included in total.

<sup>5</sup> Includes Outside U.S.

<sup>6</sup> Military personnel holding civilian certificate stationed in foreign country.

<sup>7</sup> Outside U.S. includes Other U.S. Areas outside of the 50 states and foreign countries.



**TABLE 7.6**  
**ESTIMATED ACTIVE WOMEN PILOTS AND FLIGHT INSTRUCTORS**  
**BY FAA REGION AND STATE**  
**DECEMBER 31, 1993**

FAA Region and State	Total Pilots	Students <sup>1</sup>	Airplane <sup>2</sup>			Misc. <sup>3</sup>	Flight Instructor <sup>4</sup>
			Private	Commercial	Airline Transport		
<b>Total <sup>5</sup></b> .....	<b>39,460</b>	<b>12,788</b>	<b>16,997</b>	<b>5,981</b>	<b>2,738</b>	<b>956</b>	<b>4,338</b>
<b>United States—Total</b> .....	<b>38,319</b>	<b>12,475</b>	<b>16,585</b>	<b>5,683</b>	<b>2,672</b>	<b>904</b>	<b>4,239</b>
<b>Alaskan Region—Total</b> .....	<b>714</b>	<b>195</b>	<b>358</b>	<b>112</b>	<b>41</b>	<b>8</b>	<b>83</b>
<b>Central Region—Total</b> .....	<b>1,779</b>	<b>630</b>	<b>853</b>	<b>209</b>	<b>69</b>	<b>18</b>	<b>141</b>
Iowa .....	326	121	157	39	9	0	24
Kansas .....	508	160	259	57	25	7	44
Missouri .....	709	257	334	76	31	11	54
Nebraska .....	236	92	103	37	4	0	19
<b>Eastern Region—Total</b> .....	<b>5,194</b>	<b>1,749</b>	<b>2,178</b>	<b>761</b>	<b>332</b>	<b>174</b>	<b>587</b>
Delaware .....	85	30	30	13	8	4	12
District of Columbia .....	51	16	24	5	5	1	3
Maryland .....	697	221	325	91	39	21	62
New Jersey .....	790	261	330	123	52	24	96
New York .....	1,281	458	504	178	71	70	143
Pennsylvania .....	1,237	404	541	197	70	25	147
Virginia .....	883	286	357	133	83	24	115
West Virginia .....	114	50	43	15	2	4	6
Armed Forces Europe <sup>6</sup> .....	56	23	24	6	2	1	3
<b>Great Lakes Region—Total</b> .....	<b>6,581</b>	<b>2,260</b>	<b>2,789</b>	<b>1,051</b>	<b>383</b>	<b>98</b>	<b>760</b>
Illinois .....	1,538	507	586	294	127	24	223
Indiana .....	652	218	289	104	33	8	70
Michigan .....	1,179	423	500	164	59	33	130
Minnesota .....	1,008	329	435	169	63	12	114
North Dakota .....	147	48	62	36	1	0	15
Ohio .....	1,245	424	551	186	68	16	145
South Dakota .....	115	47	50	12	6	0	9
Wisconsin .....	697	264	316	86	26	5	54
<b>New England Region—Total</b> .....	<b>1,935</b>	<b>593</b>	<b>891</b>	<b>275</b>	<b>123</b>	<b>53</b>	<b>207</b>
Connecticut .....	483	137	205	76	47	18	62
Maine .....	191	68	98	20	4	1	10
Massachusetts .....	738	227	341	108	43	19	75
New Hampshire .....	281	81	122	49	21	8	44
Rhode Island .....	103	35	56	10	1	1	4
Vermont .....	139	45	69	12	7	6	12
<b>Northwest Mountain Region—Total</b> .....	<b>4,372</b>	<b>1,370</b>	<b>1,892</b>	<b>675</b>	<b>322</b>	<b>113</b>	<b>513</b>
Colorado .....	1,213	363	443	242	128	37	187
Idaho .....	273	91	134	31	10	7	26
Montana .....	217	80	104	24	9	0	18
Oregon .....	683	199	341	90	29	24	65
Utah .....	284	119	103	37	18	7	27
Washington .....	1,573	484	689	242	120	38	183
Wyoming .....	129	34	78	9	8	0	7
<b>Southern Region—Total</b> .....	<b>6,168</b>	<b>2,157</b>	<b>2,448</b>	<b>921</b>	<b>549</b>	<b>93</b>	<b>673</b>
Alabama .....	369	158	148	43	6	14	22
Florida .....	2,838	888	1,180	485	252	33	349
Georgia .....	777	332	268	94	73	10	71
Kentucky .....	306	129	97	41	37	2	30
Mississippi .....	180	86	55	23	12	4	17
North Carolina .....	758	233	323	108	81	13	92
South Carolina .....	285	102	126	36	14	7	23
Tennessee .....	651	228	250	90	73	10	69
Armed Forces Europe <sup>6</sup> .....	4	1	1	1	1	0	0
<b>Southwest Region—Total</b> .....	<b>3,994</b>	<b>1,381</b>	<b>1,683</b>	<b>557</b>	<b>293</b>	<b>80</b>	<b>426</b>
Arkansas .....	236	96	100	31	9	0	19
Louisiana .....	298	116	102	53	20	7	38
New Mexico .....	298	88	131	44	21	14	40
Oklahoma .....	617	232	270	80	31	4	64
Texas .....	2,545	849	1,080	349	212	55	265

**TABLE 7.6—Continued**  
**ESTIMATED ACTIVE WOMEN PILOTS AND FLIGHT INSTRUCTORS**  
**BY FAA REGION AND STATE**  
**DECEMBER 31, 1993**

FAA Region and State	Total Pilots	Students <sup>1</sup>	Airplane <sup>2</sup>			Misc. <sup>3</sup>	Flight Instructor <sup>4</sup>
			Private	Commercial	Airline Transport		
<b>Western-Pacific Region—Total .....</b>	<b>7,582</b>	<b>2,140</b>	<b>3,493</b>	<b>1,122</b>	<b>560</b>	<b>267</b>	<b>849</b>
Arizona .....	1,048	239	520	178	78	33	129
California .....	5,896	1,707	2,742	847	394	206	638
Hawaii .....	205	49	59	38	40	19	35
Nevada .....	368	104	157	53	46	8	46
Armed Forces Pacific <sup>6</sup> .....	65	41	15	6	2	1	1
<b>Outside U. S.—Total <sup>7</sup> .....</b>	<b>1,141</b>	<b>313</b>	<b>412</b>	<b>298</b>	<b>66</b>	<b>52</b>	<b>99</b>
<b>Other U. S. Areas: .....</b>	<b>111</b>	<b>59</b>	<b>24</b>	<b>13</b>	<b>8</b>	<b>7</b>	<b>0</b>
Canal Zone .....	1	0	0	0	1	0	0
Guam .....	17	8	2	4	3	0	0
Puerto Rico .....	65	40	11	5	3	6	0
Virgin Islands .....	28	11	11	4	1	1	0

<sup>1</sup> Category of certificate unknown.

<sup>2</sup> Includes pilots with an airplane only certificate. Also includes those with an airplane and a helicopter and/or glider certificate.

<sup>3</sup> Includes helicopter, glider, and recreational pilots.

<sup>4</sup> Not included in total.

<sup>5</sup> Includes Outside U.S.

<sup>6</sup> Military personnel holding civilian certificate stationed in foreign country.

<sup>7</sup> Outside U.S. includes Other U.S. Areas outside of the 50 states and foreign countries.

**TABLE 7.7**  
**ESTIMATED ACTIVE HELICOPTER PILOTS BY CLASS OF CERTIFICATE**  
**DECEMBER 31, 1984-1993**

Class of Certificate	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984
<b>Total</b> .....	<b>31,270</b>	<b>32,158</b>	<b>32,605</b>	<b>32,741</b>	<b>31,602</b>	<b>31,349</b>	<b>31,513</b>	<b>31,697</b>	<b>31,206</b>	<b>30,507</b>
<b>Private—Total</b> .....	<b>4,328</b>	<b>4,188</b>	<b>4,097</b>	<b>3,640</b>	<b>3,176</b>	<b>2,962</b>	<b>2,721</b>	<b>2,539</b>	<b>2,390</b>	<b>2,266</b>
Private Helicopter .....	1,933	1,917	1,864	1,572	1,264	1,143	1,019	892	808	712
Private Helicopter, Private Airplane .....	1,792	1,731	1,722	1,592	1,459	1,392	1,316	1,288	1,236	1,206
Private Helicopter, Private Airplane, Private Glider .....	67	68	71	67	58	60	55	47	48	48
Private Helicopter, Commercial Airplane .....	465	401	379	348	325	302	274	262	245	248
Private Helicopter, Commercial Airplane, Commercial Glider .....	29	27	26	28	27	24	18	16	19	16
Private Gyroplane .....	17	16	15	11	12	15	10	9	5	6
Private Gyroplane, Private Airplane .....	25	28	20	22	31	26	29	25	29	30
<b>Commercial—Total</b> .....	<b>24,216</b>	<b>25,299</b>	<b>25,972</b>	<b>26,750</b>	<b>26,195</b>	<b>26,261</b>	<b>26,766</b>	<b>27,251</b>	<b>27,011</b>	<b>26,583</b>
Commercial Helicopter .....	6,684	7,199	7,469	7,524	7,116	6,997	7,228	7,230	6,862	6,415
Commercial Helicopter, Private Airplane .....	4,446	4,561	4,405	4,357	4,186	4,081	3,904	3,805	3,713	3,457
Commercial Helicopter, Private Glider .....	5	5	7	4	6	7	5	6	5	2
Commercial Helicopter, Commercial Glider .....	6	4	2	3	2	4	5	6	9	9
Commercial Helicopter, Private Airplane, Commercial Gyroplane .....	7	2	1	2	2	2	2	1	1	1
Commercial Helicopter, Private Airplane, Private Glider ..	31	37	35	36	30	32	37	33	21	21
Commercial Helicopter, Private Airplane, Commercial Glider .....	16	15	14	15	17	17	12	14	16	15
Commercial Helicopter, Commercial Airplane .....	12,303	12,767	13,316	14,036	14,085	14,346	14,778	15,335	15,550	15,817
Commercial Helicopter, Commercial Airplane, Private Glider .....	157	149	146	163	154	150	152	156	162	154
Commercial Helicopter, Commercial Airplane, Commercial Glider .....	487	509	518	543	535	562	587	609	614	632
Commercial Gyroplane .....	2	1	1	2	1	0				
Commercial Helicopter, Commercial Airplane, Commercial Gyroplane .....	25	18	19	20	19	22	20	23	25	25
Commercial Helicopter, Commercial Airplane, Commercial Gyroplane, Commercial Glider .....	12	11	10	10	11	13	10	9	7	7
Commercial Helicopter, Commercial Gyroplane .....	22	2	1	2	1	2	2	1		
Commercial Gyroplane, Commercial Airplane .....	30	20	25	31	27	24	24	21	23	24
Commercial Gyroplane, Commercial Airplane, Commercial Glider .....	3	1	2	2	3	2	1	1	1	3
<b>Airline Transport—Total</b> .....	<b>2,726</b>	<b>2,671</b>	<b>2,536</b>	<b>2,351</b>	<b>2,231</b>	<b>2,126</b>	<b>2,026</b>	<b>1,907</b>	<b>1,805</b>	<b>1,658</b>
Airline Transport Helicopter .....	519	508	500	449	461	440	433	435	432	387
Airline Transport Helicopter, Airline Transport Airplane ....	2,207	2,163	2,036	1,902	1,770	1,686	1,593	1,472	1,373	1,271

**TABLE 7.8**  
**ESTIMATED ACTIVE GLIDER PILOTS BY CLASS OF CERTIFICATE**  
**DECEMBER 31, 1984-1993**

Class of Certificate	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984
<b>Total</b> .....	<b>19,611</b>	<b>19,639</b>	<b>19,570</b>	<b>19,546</b>	<b>19,149</b>	<b>19,095</b>	<b>19,530</b>	<b>20,355</b>	<b>20,308</b>	<b>20,733</b>
<b>Private—Total</b> .....	<b>13,460</b>	<b>13,434</b>	<b>13,370</b>	<b>13,268</b>	<b>13,006</b>	<b>12,899</b>	<b>13,158</b>	<b>13,702</b>	<b>13,634</b>	<b>13,729</b>
Private Glider .....	7,210	7,090	6,929	6,773	6,652	6,528	6,734	7,168	7,000	6,971
Private Glider, Private Airplane .....	4,014	4,030	4,113	4,144	4,049	4,059	4,105	4,144	4,234	4,347
Private Glider, Private Airplane, Private Helicopter .....	67	68	71	67	58	60	55	47	48	48
Private Glider, Private Airplane, Commercial Helicopter ..	31	37	35	36	30	32	37	33	21	21
Private Glider, Commercial Airplane .....	1,976	2,055	2,072	2,081	2,057	2,063	2,070	2,148	2,164	2,186
Private Glider, Commercial Airplane, Commercial Helicopter .....	157	149	146	163	154	150	152	156	162	154
Private Glider, Commercial Helicopter .....	5	5	4	4	6	7	5	6	5	2
<b>Commercial—Total</b> .....	<b>6,151</b>	<b>6,205</b>	<b>6,200</b>	<b>6,278</b>	<b>6,143</b>	<b>6,196</b>	<b>6,372</b>	<b>6,653</b>	<b>6,674</b>	<b>7,004</b>
Commercial Glider .....	1,118	1,115	1,104	1,060	1,056	1,072	1,167	1,243	1,168	1,419
Commercial Glider, Commercial Airplane .....	3,560	3,630	3,645	3,776	3,685	3,703	3,777	3,983	4,073	4,149
Commercial Glider, Private Airplane .....	920	893	878	841	807	799	795	772	767	754
Commercial Glider, Private Airplane, Commercial Helicopter .....	16	15	14	15	17	17	12	14	16	15
Commercial Glider, Commercial Helicopter .....	6	4	3	3	2	4	5	6	9	9
Commercial Glider, Commercial Airplane, Private Helicopter .....	29	27	26	28	27	24	18	16	19	16
Commercial Glider, Commercial Airplane, Commercial Helicopter .....	487	509	518	543	535	562	587	609	614	632
Commercial Glider, Commercial Airplane, Commercial Gyroplane .....	3	1	2	2	3	2	1	1	1	3
Commercial Glider, Commercial Airplane, Commercial Gyroplane, Commercial Helicopter .....	12	11	10	10	11	13	10	9	7	7

**TABLE 7.9**  
**ESTIMATED INSTRUMENT RATINGS HELD**  
**BY CLASS OF CERTIFICATE BY FAA REGION**  
**DECEMBER 31, 1993**

Class of Certificate	Total <sup>1</sup>	Alaskan	Central	Eastern	Great Lakes	New England	North-west Mountain	Southern	South-west	Western Pacific	Outside U.S. <sup>2</sup>
<b>Total—All Pilots .....</b>	<b>305,517</b>	<b>4,027</b>	<b>13,196</b>	<b>38,011</b>	<b>46,093</b>	<b>12,978</b>	<b>29,374</b>	<b>60,279</b>	<b>37,297</b>	<b>48,908</b>	<b>15,354</b>
<b>Airplane</b>											
<b>Private—Total .....</b>	<b>57,198</b>	<b>388</b>	<b>3,183</b>	<b>7,949</b>	<b>10,924</b>	<b>2,847</b>	<b>4,792</b>	<b>10,068</b>	<b>6,117</b>	<b>10,080</b>	<b>850</b>
Private Airplane (only) .....	52,692	323	2,952	7,270	10,365	2,649	4,358	9,093	5,581	9,331	770
Private Airplane, Private Glider .....	1,111	7	37	182	176	57	99	182	102	253	16
Private Airplane, Commercial Glider .....	141	1	3	22	22	17	22	10	16	26	2
Private Airplane, Private Helicopter .....	501	2	21	74	65	32	49	86	55	107	10
Private Airplane, Private Glider, Private Helicopter .....	31	0	0	5	6	2	3	2	3	8	2
Private Airplane, Commercial Helicopter ..	2,693	55	168	392	287	88	259	686	359	349	50
Private Airplane, Private Gyroplane .....	4	0	1	0	2	1	0	0	0	0	0
Private Airplane, Private Glider, Commercial Helicopter .....	15	0	1	2	0	0	2	5	0	5	0
Private Airplane, Commercial Glider, Commercial Helicopter .....	9	0	0	2	0	1	0	4	1	1	0
Private Airplane, Other .....	1	0	0	0	1	0	0	0	0	0	0
<b>Commercial—Total .....</b>	<b>126,493</b>	<b>2,087</b>	<b>5,903</b>	<b>15,857</b>	<b>19,809</b>	<b>5,007</b>	<b>11,940</b>	<b>23,293</b>	<b>15,047</b>	<b>19,641</b>	<b>7,909</b>
Commercial Airplane (only) .....	109,442	1,807	5,124	13,520	17,847	4,359	10,183	19,520	12,987	16,520	7,575
Commercial Airplane, Private Glider .....	1,721	24	79	257	269	69	182	302	185	330	24
Commercial Airplane, Commercial Glider ..	3,012	29	125	464	417	181	395	498	324	548	31
Commercial Airplane, Private Helicopter ..	425	7	22	54	57	21	34	71	41	93	25
Commercial Airplane, Commercial Helicopter .....	11,220	210	523	1,473	1,148	335	1,074	2,775	1,448	1,993	241
Commercial Airplane, Private Glider, Commercial Helicopter .....	139	1	4	22	17	9	19	30	10	23	4
Commercial Airplane, Commercial Glider, Commercial Helicopter .....	448	8	21	62	36	29	47	82	42	114	5
Commercial Airplane, Commercial Gyroplane .....	23	1	2	1	4	2	2	5	3	3	0
Commercial Airplane, Commercial Helicopter, Commercial Gyroplane .....	21	0	0	1	3	0	2	5	1	6	3
Commercial Airplane, Commercial Gyroplane, Commercial Glider .....	3	0	1	0	1	0	0	0	0	1	0
Commercial Airplane, Commercial Glider, Private Helicopter .....	27	0	1	3	6	2	1	3	3	7	1
Commercial Airplane, Commercial Gyroplane, Commercial Helicopter, Commercial Glider .....	12	0	1	0	2	0	1	2	3	3	0
<b>Airline Transport—Total .....</b>	<b>117,070</b>	<b>1,475</b>	<b>3,894</b>	<b>13,465</b>	<b>14,909</b>	<b>4,958</b>	<b>12,250</b>	<b>25,598</b>	<b>15,453</b>	<b>18,569</b>	<b>6,501</b>
Airline Transport Airplane (only) .....	114,863	1,408	3,840	13,092	14,718	4,828	12,060	25,117	15,109	18,268	6,423
Airline Transport Airplane, Airline Transport Helicopter .....	2,207	67	54	373	191	130	190	479	344	301	78
<b>Rotorcraft (only)—Total .....</b>	<b>4,756</b>	<b>77</b>	<b>216</b>	<b>740</b>	<b>451</b>	<b>166</b>	<b>392</b>	<b>1,322</b>	<b>680</b>	<b>618</b>	<b>94</b>
Commercial Helicopter .....	4,689	77	214	730	444	162	385	1,311	667	610	89
Airline Transport Helicopter .....	51	0	2	6	5	3	7	6	11	6	5
Other .....	16	0	0	4	2	1	0	5	2	2	0

<sup>1</sup> Includes Outside U.S. total.

<sup>2</sup> Outside U.S. includes airmen certificated by FAA who live outside the 50 states or foreign countries.

**TABLE 7.10**  
**ESTIMATED INSTRUMENT RATINGS HELD**  
**BY CLASS OF CERTIFICATE**  
**DECEMBER 31, 1984-1993**

Class of Certificate	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
<b>Total—All Pilots</b> .....	<b>256,584</b>	<b>258,559</b>	<b>262,388</b>	<b>266,122</b>	<b>273,804</b>	<b>282,804</b>	<b>297,073</b>	<b>303,193</b>	<b>306,169</b>	<b>305,517</b>
<b>Airplane</b>										
<b>Private—Total</b> .....	<b>43,312</b>	<b>43,902</b>	<b>45,672</b>	<b>47,746</b>	<b>49,381</b>	<b>51,067</b>	<b>53,920</b>	<b>55,557</b>	<b>56,199</b>	<b>57,198</b>
Private Airplane (only) .....	39,962	40,330	41,947	43,885	45,316	46,859	49,550	51,215	51,753	52,692
Private Airplane, Private Glider .....	964	954	955	983	1,007	1,023	1,069	1,103	1,096	1,111
Private Airplane, Commercial Glider .....	82	85	95	102	108	119	122	134	131	141
Private Airplane, Private Helicopter .....	295	313	318	332	356	403	432	451	470	501
Private Airplane, Private Glider, Private Helicopter ...	17	16	20	25	25	27	32	31	28	31
Private Airplane, Commercial Helicopter .....	1,968	2,180	2,302	2,385	2,537	2,606	2,683	2,594	2,688	2,693
Private Airplane, Private Gyroplane .....	3	2	2	3	3	5	5	3	4	4
Private Airplane, Private Glider, Commercial Helicopter .....	10	11	20	21	15	12	16	16	19	15
Private Airplane, Commercial Glider, Commercial Helicopter .....	10	10	12	9	13	12	10	9	9	9
Private Airplane, Other .....	1	1	1	1	1	1	1	1	1	1
<b>Commercial Pilots—Total</b> .....	<b>128,978</b>	<b>126,352</b>	<b>123,559</b>	<b>121,072</b>	<b>121,674</b>	<b>123,908</b>	<b>129,426</b>	<b>129,774</b>	<b>128,828</b>	<b>126,493</b>
Commercial Airplane (only) .....	108,916	106,522	103,913	102,017	102,982	105,402	110,719	111,835	111,350	109,442
Commercial Airplane, Private Glider .....	1,833	1,826	1,825	1,756	1,778	1,783	1,825	1,802	1,795	1,721
Commercial Airplane, Commercial Glider .....	3,355	3,318	3,227	3,098	3,033	3,037	3,141	3,048	3,036	3,012
Commercial Airplane, Private Helicopter .....	203	208	224	234	264	282	307	336	365	425
Commercial Airplane, Commercial Helicopter .....	13,913	13,723	13,624	13,250	12,911	12,708	12,716	12,079	11,612	11,220
Commercial Airplane, Private Glider, Commercial Helicopter .....	141	151	143	134	132	136	145	130	132	139
Commercial Airplane, Commercial Glider, Commercial Helicopter .....	561	549	549	526	506	488	496	474	468	448
Commercial Airplane, Commercial Gyroplane .....	14	14	13	15	15	19	22	18	17	23
Commercial Airplane, Commercial Helicopter, Commercial Gyroplane .....	20	18	16	15	18	16	17	16	17	21
Commercial Airplane, Commercial Gyroplane, Commercial Glider .....	2	1	1	1	1	2	2	2	1	3
Commercial Airplane, Commercial Glider, Private Helicopter .....	13	15	15	16	21	24	27	25	25	27
Commercial Airplane, Commercial Gyroplane, Commercial Helicopter Commercial Glider .....	7	7	9	10	13	11	9	9	10	12
<b>Airline Transport—Total</b> .....	<b>79,192</b>	<b>82,740</b>	<b>87,186</b>	<b>91,287</b>	<b>96,968</b>	<b>102,087</b>	<b>107,732</b>	<b>112,167</b>	<b>115,855</b>	<b>117,070</b>
Airline Transport Airplane (only) .....	77,921	81,367	85,714	89,694	95,282	100,317	105,830	110,131	113,692	114,863
Airline Transport Airplane, Airline Transport Helicopter .....	1,271	1,373	1,472	1,593	1,686	1,770	1,902	2,036	2,163	2,207
<b>Rotorcraft (only)—Total</b> .....	<b>5,102</b>	<b>5,565</b>	<b>5,971</b>	<b>6,017</b>	<b>5,781</b>	<b>5,742</b>	<b>5,995</b>	<b>5,695</b>	<b>5,287</b>	<b>4,756</b>
Commercial Helicopter .....	5,016	5,472	5,873	5,927	5,695	5,660	5,923	5,624	5,214	4,689
Airline Transport Helicopter .....	73	82	89	81	75	71	62	59	58	51
Other .....	13	11	9	9	11	11	10	12	15	16

**TABLE 7.11**  
**ESTIMATED TOTAL PILOTS AND INSTRUMENT RATED PILOTS**  
**DECEMBER 31, 1984-1993**

Calendar Year	Total Number <sup>1</sup>	Instrument Rated Pilots	
		Number	Percent of Total
1993	561,486	305,517	54%
1992	568,362	306,169	54%
1991	571,892	303,193	53%
1990	574,208	297,073	52%
1989	557,466	282,804	51%
1988	557,103	273,804	49%
1987	553,637	266,122	48%
1986	558,845	262,388	47%
1985	562,888	258,559	46%
1984	572,295	256,584	45%

<sup>1</sup> Excludes student pilots.

**TABLE 7.12**  
**ESTIMATED ACTIVE PILOT CERTIFICATES HELD**  
**BY CATEGORY AND AGE GROUP OF HOLDER**  
**DECEMBER 31, 1993**

Age Group	Type of Pilot Certificate								Flight Instructor <sup>4</sup>
	Total	Student <sup>1</sup>	Recreational <sup>1</sup>	Airplane <sup>2</sup>			Helicopter (Only)	Glider (Only) <sup>3</sup>	
				Private	Commercial	Airline Transport			
Total	665,069	103,583	206	283,700	143,014	117,070	9,168	8,328	75,021
14-15	31	31	0	0	0	0	0	0	0
16-19	14,985	10,514	2	4,126	211	0	50	82	61
20-24	49,607	16,337	5	19,615	12,336	353	766	195	6,023
25-29	68,472	16,020	11	22,644	21,424	5,964	2,060	349	11,355
30-34	84,208	16,162	21	31,757	17,298	16,422	1,849	699	10,265
35-39	91,681	14,435	34	39,883	14,990	19,737	1,384	1,218	9,407
40-44	88,135	11,049	29	41,608	14,323	18,444	1,261	1,421	8,873
45-49	84,526	7,932	26	36,945	16,839	20,371	1,141	1,272	9,526
50-54	64,657	4,869	19	28,744	13,998	15,824	406	797	7,021
55-59	45,810	2,751	15	20,517	10,728	11,047	155	597	5,026
60 and over	72,957	3,483	44	37,861	20,867	8,908	96	1,698	7,464

<sup>1</sup> Category of certificate unknown.

<sup>2</sup> Includes pilots with an airplane only certificate. Also includes those with an airplane and a helicopter and/or glider certificate.

<sup>3</sup> Glider pilots are not required to have a medical examination; however, totals above represent pilots who received a medical examination.

<sup>4</sup> Not included in total active pilots.

**TABLE 7.13**  
**AVERAGE AGE OF ACTIVE PILOTS BY CATEGORY**  
**DECEMBER 31, 1984-1993**

Calendar Year	Type of Pilot Certificate					
	Total <sup>1</sup>	Student <sup>2</sup>	Recreational <sup>2</sup>	Airplane <sup>3</sup>		
				Private	Commercial	Airline Transport
1984	39.2	32.1	N/A	40.4	42.0	42.7
1985	39.5	32.4	N/A	40.8	42.4	42.8
1986	39.7	32.2	N/A	41.1	42.6	43.0
1987	39.9	32.3	N/A	41.4	42.7	43.1
1988	40.1	32.5	N/A	41.4	42.6	43.2
1989	40.2	32.7	N/A	41.8	42.5	43.4
1990	40.5	32.5	41.7	42.0	42.2	43.6
1991	40.5	32.6	43.5	42.0	41.8	43.7
1992	40.8	32.9	44.4	42.2	41.7	43.8
1993	41.3	33.7	45.5	42.7	41.9	44.1

<sup>1</sup> Includes helicopter (only) and glider (only) not shown separately.

<sup>2</sup> Category of certificate unknown.

<sup>3</sup> Includes pilots with an airplane only certificate. Also includes those with an airplane and a helicopter and/or glider certificate.

N/A Not available. Recreational certificate first issued in 1990.



**TABLE 7.14**  
**NONPILOT AIRMEN CERTIFICATES HELD**  
**BY FAA REGION AND STATE**  
**DECEMBER 31, 1993<sup>1</sup>**

FAA Region and State	Total	Mechanic	Parachute Rigger	Ground Instructor	Dispatcher	Flight Navigator	Flight Engineer
<b>Total<sup>2</sup></b> .....	<b>559,726</b>	<b>401,060</b>	<b>8,417</b>	<b>76,050</b>	<b>12,883</b>	<b>1,039</b>	<b>60,277</b>
<b>United States—Total</b> .....	<b>534,452</b>	<b>383,136</b>	<b>8,223</b>	<b>73,520</b>	<b>10,401</b>	<b>1,020</b>	<b>58,152</b>
<b>Alaskan Region—Total</b> .....	<b>5,895</b>	<b>4,004</b>	<b>124</b>	<b>926</b>	<b>273</b>	<b>7</b>	<b>561</b>
<b>Central Region—Total</b> .....	<b>26,197</b>	<b>20,566</b>	<b>390</b>	<b>3,648</b>	<b>180</b>	<b>5</b>	<b>1,408</b>
Iowa .....	3,258	2,458	85	587	15	0	113
Kansas .....	7,341	5,799	99	1,079	45	1	318
Missouri .....	13,264	10,569	142	1,593	108	3	849
Nebraska .....	2,334	1,740	64	389	12	1	128
<b>Eastern Region—Total</b> .....	<b>74,443</b>	<b>54,549</b>	<b>1,281</b>	<b>10,115</b>	<b>2,350</b>	<b>154</b>	<b>5,994</b>
Delaware .....	1,437	1,043	23	182	22	5	162
District of Columbia .....	360	223	17	87	17	0	16
Maryland .....	5,154	3,271	112	997	92	7	675
New Jersey .....	11,863	8,584	188	1,490	355	36	1,210
New York .....	26,643	21,313	246	2,816	1,273	40	955
Pennsylvania .....	18,200	13,538	313	2,542	395	36	1,376
Virginia .....	8,793	5,071	313	1,680	185	30	1,514
West Virginia .....	1,304	941	41	247	7	0	68
Armed Forces Europe <sup>3</sup> .....	689	565	28	74	4	0	18
<b>Great Lakes Region—Total</b> .....	<b>72,745</b>	<b>51,287</b>	<b>1,086</b>	<b>11,629</b>	<b>1,383</b>	<b>29</b>	<b>7,331</b>
Illinois .....	18,907	12,662	251	2,973	423	13	2,585
Indiana .....	7,602	5,457	154	1,190	95	2	704
Michigan .....	11,446	8,216	167	2,199	123	3	738
Minnesota .....	12,958	9,209	115	1,457	483	4	1,690
North Dakota .....	1,343	1,087	20	179	11	1	45
Ohio .....	13,429	9,709	245	2,345	167	5	958
South Dakota .....	1,207	873	16	226	7	0	85
Wisconsin .....	5,853	4,074	118	1,060	74	1	526
<b>New England Region—Total</b> .....	<b>21,889</b>	<b>15,419</b>	<b>288</b>	<b>3,147</b>	<b>329</b>	<b>124</b>	<b>2,582</b>
Connecticut .....	6,605	4,603	73	851	107	82	889
Maine .....	1,616	1,074	39	295	35	6	167
Massachusetts .....	9,418	7,338	126	1,224	118	13	599
New Hampshire .....	2,570	1,288	27	453	41	18	743
Rhode Island .....	901	637	12	158	12	1	81
Vermont .....	779	479	11	166	16	4	103
<b>Northwest Mountain Region—Total</b> .....	<b>49,250</b>	<b>32,415</b>	<b>1,200</b>	<b>7,282</b>	<b>645</b>	<b>133</b>	<b>7,575</b>
Colorado .....	15,050	9,388	145	2,356	241	29	2,891
Idaho .....	2,078	1,377	177	369	14	5	136
Montana .....	2,343	1,578	247	384	8	4	122
Oregon .....	5,285	3,775	209	898	55	17	331
Utah .....	3,983	2,467	78	555	28	9	846
Washington .....	19,107	12,771	316	2,525	289	64	3,142
Wyoming .....	1,404	1,059	28	195	10	5	107
<b>Southern Region—Total</b> .....	<b>101,969</b>	<b>69,331</b>	<b>1,589</b>	<b>13,683</b>	<b>2,379</b>	<b>214</b>	<b>14,773</b>
Alabama .....	7,157	5,706	113	1,075	15	8	240
Florida .....	44,979	30,647	508	6,205	1,380	153	6,086
Georgia .....	20,931	14,476	227	1,812	396	20	4,000
Kentucky .....	4,196	2,479	138	633	127	1	818
Mississippi .....	2,274	1,646	32	410	13	5	168
North Carolina .....	10,078	6,674	328	1,509	162	16	1,389
South Carolina .....	3,875	2,666	80	681	29	3	416
Tennessee .....	8,408	4,979	158	1,351	257	8	1,655
Armed Forces Europe <sup>3</sup> .....	71	58	5	7	0	0	1
<b>Southwest Region—Total</b> .....	<b>78,413</b>	<b>58,057</b>	<b>911</b>	<b>9,818</b>	<b>1,270</b>	<b>66</b>	<b>8,291</b>
Arkansas .....	3,244	2,421	65	541	23	1	193
Louisiana .....	5,516	4,286	81	727	45	5	372
New Mexico .....	2,831	1,972	66	605	33	3	152
Oklahoma .....	17,317	15,151	156	1,557	40	4	409
Texas .....	49,505	34,227	543	6,388	1,129	53	7,165

**TABLE 7.14—Continued**  
**NONPILOT AIRMEN CERTIFICATES HELD**  
**BY FAA REGION AND STATE**  
**DECEMBER 31, 1993<sup>1</sup>**

FAA Region and State	Total	Mechanic	Parachute Rigger	Ground Instructor	Dispatcher	Flight Navigator	Flight Engineer
<b>Western-Pacific Region—Total .....</b>	<b>103,651</b>	<b>77,508</b>	<b>1,354</b>	<b>13,272</b>	<b>1,592</b>	<b>288</b>	<b>9,637</b>
Arizona .....	12,897	9,298	177	2,055	270	18	1,079
California .....	82,623	62,837	1,040	10,055	1,082	217	7,392
Hawaii .....	3,828	2,841	38	412	158	4	375
Nevada .....	3,839	2,169	67	704	69	49	781
Armed Forces Pacific <sup>3</sup> .....	464	363	32	46	13	0	10
<b>Outside U.S.—Total<sup>4</sup> .....</b>	<b>25,274</b>	<b>17,924</b>	<b>194</b>	<b>2,530</b>	<b>2,482</b>	<b>19</b>	<b>2,125</b>
<b>Other U.S. Areas: .....</b>	<b>1,967</b>	<b>1,487</b>	<b>35</b>	<b>233</b>	<b>86</b>	<b>1</b>	<b>125</b>
American Samoa .....	19	14	0	4	0	0	1
Canal Zone .....	38	13	18	4	2	0	1
Guam .....	293	180	3	29	8	0	73
Puerto Rico .....	1,457	1,158	12	171	74	1	41
Virgin Islands .....	151	113	2	25	2	0	9
Wake Island .....	9	9	0	0	0	0	0

<sup>1</sup> Data for flight engineers and flight navigators represent total active ratings held. Data for dispatchers, mechanics, parachute riggers and ground instructors represent total ratings issued to date. These ratings retain their validity.

<sup>2</sup> Includes Outside U.S.

<sup>3</sup> Military personnel holding civilian certificate stationed in foreign country.

<sup>4</sup> Outside U.S. includes Other U.S. Areas outside of the 50 states and foreign countries.

**TABLE 7.15**  
**WOMEN NONPILOT CERTIFICATES HELD**  
**BY FAA REGION AND STATE**  
**DECEMBER 31, 1993<sup>1</sup>**

FAA Region and State	Total	Mechanic	Parachute Rigger	Ground Instructor	Dispatcher	Flight Navigator	Flight Engineer
<b>Total<sup>2</sup></b> .....	<b>12,363</b>	<b>4,839</b>	<b>413</b>	<b>4,615</b>	<b>1,083</b>	<b>0</b>	<b>1,413</b>
<b>United States—Total</b> .....	<b>12,111</b>	<b>4,810</b>	<b>401</b>	<b>4,495</b>	<b>1,005</b>	<b>0</b>	<b>1,400</b>
<b>Alaskan Region—Total</b> .....	<b>202</b>	<b>52</b>	<b>6</b>	<b>64</b>	<b>62</b>	<b>0</b>	<b>18</b>
<b>Central Region—Total</b> .....	<b>503</b>	<b>270</b>	<b>14</b>	<b>189</b>	<b>8</b>	<b>0</b>	<b>22</b>
Iowa .....	92	50	0	37	3	0	2
Kansas .....	185	111	5	60	0	0	9
Missouri .....	178	91	6	67	5	0	9
Nebraska .....	48	18	3	25	0	0	2
<b>Eastern Region—Total</b> .....	<b>1,429</b>	<b>406</b>	<b>77</b>	<b>580</b>	<b>208</b>	<b>0</b>	<b>158</b>
Delaware .....	31	13	1	11	4	0	2
District of Columbia .....	14	2	2	6	1	0	3
Maryland .....	130	26	2	64	15	0	23
New Jersey .....	190	51	8	68	39	0	24
New York .....	439	137	14	160	95	0	33
Pennsylvania .....	339	89	26	149	45	0	30
Virginia .....	241	64	21	107	7	0	42
West Virginia .....	29	19	0	9	1	0	0
Armed Forces Europe <sup>3</sup> .....	16	5	3	6	1	0	1
<b>Great Lakes Region—Total</b> .....	<b>1,906</b>	<b>714</b>	<b>54</b>	<b>754</b>	<b>160</b>	<b>0</b>	<b>224</b>
Illinois .....	559	199	13	214	34	0	99
Indiana .....	190	56	16	74	10	0	34
Michigan .....	294	94	6	158	16	0	20
Minnesota .....	287	129	3	62	57	0	36
North Dakota .....	21	7	0	11	3	0	0
Ohio .....	370	177	11	142	25	0	15
South Dakota .....	32	10	0	18	3	0	1
Wisconsin .....	153	42	5	75	12	0	19
<b>New England Region—Total</b> .....	<b>467</b>	<b>172</b>	<b>16</b>	<b>199</b>	<b>23</b>	<b>0</b>	<b>57</b>
Connecticut .....	173	81	3	53	13	0	23
Maine .....	40	11	2	19	3	0	5
Massachusetts .....	162	51	9	84	4	0	14
New Hampshire .....	66	22	1	27	3	0	13
Rhode Island .....	10	4	0	6	0	0	0
Vermont .....	16	3	1	10	0	0	2
<b>Northwest Mountain Region—Total</b> .....	<b>1,332</b>	<b>518</b>	<b>33</b>	<b>498</b>	<b>61</b>	<b>0</b>	<b>222</b>
Colorado .....	467	165	1	169	17	0	115
Idaho .....	47	15	2	24	5	0	1
Montana .....	41	9	4	24	2	0	2
Oregon .....	137	38	10	78	3	0	8
Utah .....	81	30	6	33	2	0	10
Washington .....	513	242	8	153	30	0	80
Wyoming .....	46	19	2	17	2	0	6
<b>Southern Region—Total</b> .....	<b>2,147</b>	<b>738</b>	<b>106</b>	<b>799</b>	<b>199</b>	<b>0</b>	<b>305</b>
Alabama .....	182	77	4	96	2	0	3
Florida .....	938	299	28	348	114	0	149
Georgia .....	268	126	8	76	19	0	39
Kentucky .....	132	32	6	42	25	0	27
Mississippi .....	42	16	1	20	1	0	4
North Carolina .....	244	75	27	106	11	0	25
South Carolina .....	92	45	2	34	3	0	8
Tennessee .....	247	66	30	77	24	0	50
Armed Forces Europe <sup>3</sup> .....	2	2	0	0	0	0	0
<b>Southwest Region—Total</b> .....	<b>1,673</b>	<b>782</b>	<b>46</b>	<b>563</b>	<b>147</b>	<b>0</b>	<b>135</b>
Arkansas .....	61	28	1	27	2	0	3
Louisiana .....	115	56	2	43	7	0	7
New Mexico .....	87	28	2	49	3	0	5
Oklahoma .....	355	243	8	97	1	0	6
Texas .....	1,055	427	33	347	134	0	114

**TABLE 7.15—Continued**  
**WOMEN NONPILOT CERTIFICATES HELD**  
**BY FAA REGION AND STATE**  
**DECEMBER 31, 1993<sup>1</sup>**

FAA Region and State	Total	Mechanic	Parachute Rigger	Ground Instructor	Dispatcher	Flight Navigator	Flight Engineer
<b>Western-Pacific Region—Total .....</b>	<b>2,452</b>	<b>1,158</b>	<b>49</b>	<b>849</b>	<b>137</b>	<b>0</b>	<b>259</b>
Arizona .....	331	140	4	135	26	0	26
California .....	1,921	968	40	636	78	0	199
Hawaii .....	112	29	0	39	26	0	18
Nevada .....	83	21	2	38	7	0	15
Armed Forces Pacific <sup>3</sup> .....	5	0	3	1	0	0	1
<b>Outside U.S.—Total<sup>4</sup> .....</b>	<b>252</b>	<b>29</b>	<b>12</b>	<b>120</b>	<b>78</b>	<b>0</b>	<b>13</b>
<b>Other U.S. Areas: .....</b>	<b>29</b>	<b>12</b>	<b>0</b>	<b>11</b>	<b>3</b>	<b>0</b>	<b>3</b>
American Samoa .....	0	0	0	0	0	0	0
Canal Zone .....	2	0	0	1	0	0	1
Guam .....	6	4	0	0	0	0	2
Puerto Rico .....	17	6	0	8	3	0	0
Virgin Islands .....	4	2	0	2	0	0	0
Wake Island .....	0	0	0	0	0	0	0

<sup>1</sup> Data for flight engineers and flight navigators represent total active ratings held. Data for dispatchers, mechanics, parachute riggers and ground instructors represent total ratings issued to date. These ratings retain their validity.

<sup>2</sup> Includes Outside U.S.

<sup>3</sup> Military personnel holding civilian certificate stationed in foreign country.

<sup>4</sup> Outside U.S. includes Other U.S. Areas outside of the 50 states and foreign countries.

**TABLE 7.16**  
**PILOT CERTIFICATES ISSUED BY CATEGORY AND CONDUCTOR**  
**DECEMBER 31, 1993**

Category of Certificate	Total Certi- ficates Issued	Original Issuances				Additional Ratings			
		Total	Examiner	Inspector	No Test	Total	Examiner	Inspector	No Test
<b>Pilot—Total</b> .....	<b>1 174,260</b>	<b>1 129,500</b>	<b>1 115,883</b>	<b>866</b>	<b>12,751</b>	<b>44,760</b>	<b>39,253</b>	<b>1,321</b>	<b>4,186</b>
Student .....	168,960	168,960	168,960	0	0	N/AP	N/AP	N/AP	N/AP
Recreational .....	58	58	0	57	1	0	0	0	0
Airplane .....									
Private .....	57,861	39,060	31,119	148	7,793	18,801	16,824	133	1,844
Commercial .....	23,111	12,645	8,925	45	3,675	10,466	8,480	206	1,780
Airline Transport .....	19,121	6,126	5,095	541	490	12,995	10,673	1,751	571
Helicopter (only) .....	2,680	2,310	1,468	68	774	370	224	25	121
Glider (only) .....	369	341	316	7	18	28	25	1	2
<b>Nonpilot—Total</b> .....	<b>30,341</b>	<b>23,906</b>	<b>16,474</b>	<b>343</b>	<b>7,089</b>	<b>6,435</b>	<b>5,269</b>	<b>82</b>	<b>1,084</b>
Mechanic .....	23,930	18,401	14,620	57	3,724	5,529	5,056	23	450
Parachute Rigger .....	283	254	157	13	84	29	23	1	5
Ground Instructor .....	3,540	3,042	162	55	2,825	498	34	14	450
Dispatcher .....	629	629	433	58	138	0	0	0	0
Flight Navigator .....	1	1	1	0	0	0	0	0	0
Flight Engineer .....	1,958	1,579	1,101	160	318	379	156	44	179
<b>Flight Instructor Certificates*</b> .....	<b>13,542</b>	<b>6,328</b>	<b>4,168</b>	<b>1,742</b>	<b>418</b>	<b>7,214</b>	<b>6,822</b>	<b>345</b>	<b>47</b>

<sup>1</sup> Estimate.

Note: Additional ratings are entered on current airman certificates as follows:

Private, commercial, and airline transport pilot—aircraft category, class, and type instrument rating.

Helicopter pilot—instrument and type ratings.

Flight instructor—ratings for each aircraft category in which the holder is qualified, and for instrument flying instructions.

Mechanic—airframe and powerplant ratings.

Parachute rigger—senior or master rigger—senior or master rigger ratings.

Ground instructor—ratings for each subject in which the holder is qualified to give instruction.

\* Special ratings shown on pilot certificates represented above; not included in total.

N/AP—not applicable.

**TABLE 7.17**  
**ORIGINAL AIRMEN CERTIFICATES ISSUED BY CATEGORY**  
**CALENDAR YEARS 1984-1993**

Category of Certificate	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
<b>Pilot—Total</b> .....	<b>141,761</b>	<b>135,589</b>	<b>141,625</b>	<b>149,640</b>	<b>148,018</b>	<b>146,951</b>	<b>156,955</b>	<b>161,009</b>	<b>143,532</b>	<sup>3</sup> <b>129,500</b>
Student .....	90,085	86,060	88,699	85,611	86,193	87,427	88,586	82,205	78,377	<sup>3</sup> 68,960
Recreational .....	N/A	N/A	N/A	N/A	N/A	N/A	29	87	74	58
Airplane .....										
Private .....	36,545	35,402	34,816	42,278	39,900	35,360	41,749	49,580	39,968	39,060
Commercial .....	7,702	5,404	8,889	11,314	12,042	13,759	15,500	16,869	14,354	12,645
Airline Transport .....	5,099	6,081	6,498	7,678	7,461	7,829	8,013	8,437	7,699	6,126
Helicopter (only) .....	1,806	2,105	2,209	2,217	1,947	2,240	2,700	3,344	2,684	2,310
Glider (only) .....	524	537	514	542	475	336	378	487	376	341
<b>Nonpilot—Total</b> .....	<b>15,438</b>	<b>16,332</b>	<b>16,470</b>	<b>21,878</b>	<b>21,064</b>	<b>23,078</b>	<b>27,113</b>	<b>31,882</b>	<b>27,543</b>	<b>23,906</b>
Mechanic .....	10,719	10,559	10,998	15,089	14,907	15,923	19,861	24,299	20,532	18,401
Parachute Rigger .....	149	157	149	194	142	167	227	228	232	254
Ground Instructor .....	1,283	1,359	1,386	1,825	1,716	2,133	2,664	3,527	3,508	3,042
Dispatcher .....	755	522	516	533	510	431	550	623	674	629
Flight Navigator .....	14	1	17	4	17	14	1	3	2	1
Flight Engineer .....	2,518	3,734	3,404	4,233	3,772	4,410	3,810	3,202	2,595	1,579
<b>Flight Instructor Certificates</b> <sup>1</sup> .....	<b>4,075</b>	<b>4,298</b>	<b>4,628</b>	<b>6,327</b>	<b>4,898</b>	<b>5,365</b>	<b>7,071</b>	<b>8,164</b>	<b>7,151</b>	<b>6,328</b>
<b>Instrument Ratings</b> <sup>2</sup> .....	<b>N/AP</b>	<b>N/AP</b>	<b>N/AP</b>	<b>N/AP</b>	<b>N/AP</b>	<b>N/AP</b>	<b>N/AP</b>	<b>N/AP</b>	<b>N/AP</b>	<b>N/AP</b>

<sup>1</sup> Not included in total.

<sup>2</sup> Special ratings shown on pilot certificates represented above; not included in total.

<sup>3</sup> Estimate.

N/A Not Available.

N/AP Not Applicable.

**TABLE 7.18**  
**ADDITIONAL AIRMEN RATINGS ISSUED BY CATEGORY**  
**CALENDAR YEARS 1984-1993**

Category of Certificate	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
<b>Pilot—Total</b> .....	<b>30,469</b>	<b>28,420</b>	<b>32,828</b>	<b>39,990</b>	<b>37,921</b>	<b>46,990</b>	<b>45,730</b>	<b>51,435</b>	<b>44,760</b>	<b>35,660</b>
Student .....	N/AP	N/AP	N/AP	N/AP	N/AP	N/AP	N/AP	N/AP	N/AP	N/AP
Recreational .....	N/AP	N/AP	N/AP	N/AP	N/AP	N/AP	N/AP	N/AP	N/AP	N/AP
Airplane .....										
Private .....	11,784	11,686	12,672	16,302	15,800	22,240	19,299	23,630	19,416	11,801
Commercial .....	8,892	7,197	9,241	11,365	10,597	11,778	12,584	13,506	11,630	10,466
Airline Transport .....	9,335	9,192	10,372	11,956	11,209	12,698	13,540	13,979	13,391	12,995
Helicopter (only) .....	319	207	234	293	287	252	266	291	291	370
Glider (only) .....	139	138	109	74	28	22	41	29	32	28
<b>Nonpilot—Total</b> .....	<b>4,808</b>	<b>4,713</b>	<b>5,010</b>	<b>5,486</b>	<b>6,107</b>	<b>7,688</b>	<b>8,387</b>	<b>9,567</b>	<b>7,267</b>	<b>6,385</b>
Mechanic .....	4,042	3,429	3,289	4,195	4,353	5,728	6,381	7,653	6,499	5,529
Parachute Rigger .....	12	9	11	11	8	21	12	33	22	29
Ground Instructor .....	293	343	323	366	334	399	434	493	518	498
Dispatcher .....	3	3	1	3	2	5	2	3	0	0
Flight Navigator .....	0	0	0	0	0	0	1	0	0	0
Flight Engineer .....	458	929	1,386	911	1,410	1,535	1,557	1,385	228	329
<b>Flight Instructor Certificates</b> <sup>1</sup> .....	<b>6,828</b>	<b>5,921</b>	<b>5,421</b>	<b>6,378</b>	<b>5,234</b>	<b>7,532</b>	<b>8,517</b>	<b>9,470</b>	<b>8,161</b>	<b>7,214</b>
<b>Instrument Ratings</b> <sup>2</sup> .....	<b>10,845</b>	<b>11,683</b>	<b>13,688</b>	<b>18,296</b>	<b>16,810</b>	<b>20,911</b>	<b>22,528</b>	<b>26,007</b>	<b>20,062</b>	<b>19,724</b>

<sup>1</sup> Not included in total.

<sup>2</sup> Special ratings shown on pilot certificates represented above; not included in total.

N/A Not Available.

N/AP Not Applicable.

Note: Additional ratings are entered on current airman certificates as follows:

Private, commercial, and airline transport pilot—aircraft category, class, and type instrument rating.

Helicopter pilot—instrument and type ratings.

Flight instructor—ratings for each aircraft category in which the holder is qualified, and for instrument flying instructions.

Mechanic—airframe and powerplant ratings.

Parachute rigger—senior or master rigger—senior or master rigger ratings.

Ground instructor—ratings for each subject in which the holder is qualified to give instruction.

**TABLE 7.19**  
**AIRMEN CERTIFICATES APPROVED/DISAPPROVED BY CATEGORY AND CONDUCTOR**  
**1993**

Category of Certificate	Original Issuances						Additional Ratings					
	Examiner			Inspector			Examiner			Inspector		
	Approved	Dis-approved	Total	Approved	Dis-approved	Total	Approved	Dis-approved	Total	Approved	Dis-approved	Total
<b>Pilot—Total</b> .....	<b>46,980</b>	<b>7,400</b>	<b>54,380</b>	<b>809</b>	<b>133</b>	<b>942</b>	<b>36,226</b>	<b>4,206</b>	<b>40,407</b>	<b>2,116</b>	<b>230</b>	<b>2,345</b>
Recreational .....	57	3	60	0	1	1	N/AP	N/AP	N/AP	N/AP	N/AP	N/AP
Airplane .....												
Private .....	31,119	5,714	36,833	148	32	180	16,824	3,114	19,938	133	24	157
Commercial .....	8,925	1,038	9,963	45	15	60	8,480	555	9,035	206	16	222
Airline Transport .....	5,095	645	5,740	541	85	626	10,673	537	11,210	1,751	190	1,941
Helicopter (only) .....	1,468	0	1,468	68	0	68	224	0	224	25	0	25
Glider (only) .....	316	0	316	7	0	7	25	0	0	1	0	0
<b>Nonpilot—Total</b> .....	<b>16,474</b>	<b>485</b>	<b>16,959</b>	<b>343</b>	<b>26</b>	<b>369</b>	<b>5,269</b>	<b>38</b>	<b>5,307</b>	<b>82</b>	<b>2</b>	<b>84</b>
Mechanic .....	14,620	354	14,974	57	6	63	5,056	35	5,091	23	1	24
Parachute Rigger .....	157	6	163	13	2	15	23	0	23	1	0	1
Ground Instructor .....	162	0	162	55	1	56	34	0	34	14	0	14
Dispatcher .....	433	46	479	58	2	60	0	0	0	0	0	0
Flight Navigator .....	1	0	1	0	0	0	0	0	0	0	0	0
Flight Engineer .....	1,101	79	1,180	160	15	175	156	3	159	44	1	45
<b>Flight Instructor Certificates*</b> .....	<b>4,168</b>	<b>1,287</b>	<b>5,455</b>	<b>1,742</b>	<b>314</b>	<b>2,056</b>	<b>6,822</b>	<b>314</b>	<b>7,136</b>	<b>345</b>	<b>25</b>	<b>370</b>

Note: Additional ratings are entered on current airman certificates as follows:  
Private, commercial, and airline transport pilot—aircraft category, class, and type instrument rating.  
Helicopter pilot—instrument and type ratings.  
Flight instructor—ratings for each aircraft category in which the holder is qualified, and for instrument flying instructions.  
Mechanic—airframe and powerplant ratings.  
Parachute rigger—senior or master rigger—senior or master rigger ratings.  
Ground instructor—ratings for each subject in which the holder is qualified to give instruction.  
\* Special ratings shown on pilot certificates represented above; not included in total.  
N/AP—Not applicable.

**TABLE 7.20**  
**PERCENTAGE OF AIRMEN CERTIFICATE ISSUANCES APPROVED BY CATEGORY AND CONDUCTOR**  
**1992–1993**

Category of Certificate	1993				1992			
	Original Issuances		Additional Ratings		Original Issuances		Additional Ratings	
	Examiner	Inspector	Examiner	Inspector	Examiner	Inspector	Examiner	Inspector
<b>Pilot—Total</b> .....	<b>86.4%</b>	<b>85.9%</b>	<b>89.7%</b>	<b>90.2%</b>	<b>84.0%</b>	<b>71.8%</b>	<b>88.9%</b>	<b>88.3%</b>
Recreational .....	95.0%	0.0%	N/AP	N/AP	95.6%	100.0%	N/AP	N/AP
Airplane .....								
Private .....	84.5%	82.2%	84.4%	84.7%	82.0%	82.5%	82.3%	80.7%
Commercial .....	89.6%	75.0%	93.9%	92.8%	84.9%	50.0%	93.9%	87.4%
Airline Transport .....	88.8%	86.4%	95.2%	90.2%	88.3%	65.8%	95.7%	89.5%
Helicopter (only) .....	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Glider (only) .....	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	0.0%	0.0%
<b>Nonpilot—Total</b> .....	<b>97.1%</b>	<b>93.0%</b>	<b>99.3%</b>	<b>97.6%</b>	<b>96.9%</b>	<b>88.6%</b>	<b>98.9%</b>	<b>88.2%</b>
Mechanic .....	97.6%	90.5%	99.3%	95.8%	97.3%	54.0%	99.0%	68.2%
Parachute Rigger .....	96.3%	86.7%	100.0%	100.0%	96.4%	93.3%	100.0%	100.0%
Ground Instructor .....	100.0%	98.2%	100.0%	100.0%	100.0%	93.8%	100.0%	100.0%
Dispatcher .....	90.4%	96.7%	0.0%	0.0%	90.5%	91.5%	0.0%	0.0%
Flight Navigator .....	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
Flight Engineer .....	93.3%	91.4%	98.1%	97.8%	95.1%	93.0%	93.1%	96.0%
<b>Flight Instructor Certificates*</b> .....	<b>76.4%</b>	<b>84.7%</b>	<b>95.6%</b>	<b>93.2%</b>	<b>71.3%</b>	<b>73.2%</b>	<b>94.4%</b>	<b>82.5%</b>

Note: Additional ratings are entered on current airman certificates as follows:  
Private, commercial, and airline transport pilot—aircraft category, class, and type instrument rating.  
Helicopter pilot—instrument and type ratings.  
Flight instructor—ratings for each aircraft category in which the holder is qualified, and for instrument flying instructions.  
Mechanic—airframe and powerplant ratings.  
Parachute rigger—senior or master rigger—senior or master rigger ratings.  
Ground instructor—ratings for each subject in which the holder is qualified to give instruction.  
\* Special ratings shown on pilot certificates represented above; not included in total.  
N/AP—Not applicable.

**TABLE 7.21**  
**INSTRUMENT RATINGS ISSUED**  
**1984-1993**

Class of Certificate	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
<b>Total—All Pilots</b> .....	<b>10,845</b>	<b>11,699</b>	<b>13,687</b>	<b>18,296</b>	<b>16,810</b>	<b>20,911</b>	<b>22,528</b>	<b>25,992</b>	<b>20,062</b>	<b>19,724</b>
<b>Airplane</b> .....										
<b>Private—Total</b> .....	<b>6,590</b>	<b>6,887</b>	<b>8,354</b>	<b>11,142</b>	<b>9,772</b>	<b>11,681</b>	<b>13,065</b>	<b>15,934</b>	<b>13,121</b>	<b>12,826</b>
Private Airplane (only) .....	6,140	6,438	7,840	10,397	8,946	10,554	11,848	14,362	11,769	11,417
Private Airplane, Private Glider .....	91	75	95	135	92	93	111	128	100	105
Private Airplane, Commercial Glider .....	3	1	1	12	18	18	15	30	13	18
Private Airplane, Private Helicopter .....	27	26	29	35	40	38	36	59	72	43
Private Airplane, Private Glider, Private Helicopter .....	0	0	0	13	1	2	0	3		
Private Airplane, Commercial Helicopter .....	139	172	178	234	272	293	309	359	333	311
Private Airplane, Other .....	190	175	211	328	404	682	745	994	834	929
<b>Commercial—Total</b> .....	<b>3,275</b>	<b>3,655</b>	<b>4,183</b>	<b>5,996</b>	<b>6,101</b>	<b>8,091</b>	<b>8,338</b>	<b>8,911</b>	<b>6,003</b>	<b>6,138</b>
Commercial Airplane (only) .....	2736	2,981	3,437	5,044	5,267	7,122	7,408	7,970	5,081	5,367
Commercial Airplane, Private Glider .....	28	29	31	48	49	54	54	58	33	32
Commercial Airplane, Commercial Glider .....	29	32	31	61	41	54	66	54	48	45
Commercial Airplane, Private Helicopter .....	3	11	5	14	11	12	12	22	17	22
Commercial Airplane, Commercial Helicopter .....	453	586	666	814	723	843	788	802	810	662
Commercial Airplane, Private Glider, Commercial Helicopter .....	1	2	3	7	3	3	4	1	2	4
Commercial Airplane, Commercial Glider, Commercial Helicopter .....	25	11	9	7	6	1	4	3	9	5
Commercial Airplane, Other .....	0	3	1	1	1	2	2	1	3	1
<b>Rotorcraft—Total</b> .....	<b>980</b>	<b>1,157</b>	<b>1,150</b>	<b>1,158</b>	<b>937</b>	<b>1,139</b>	<b>1,125</b>	<b>1,147</b>	<b>938</b>	<b>760</b>
Commercial Helicopter .....	977	1,156	1,145	1,135	909	1,113	1,097	1,103	898	723
Commercial Helicopter, Private Glider .....	0	1	0	1	0	0	1	4	0	0
Commercial Helicopter, Commercial Glider .....	11	0	0	0	0	0	0	0		
Commercial Helicopter, Airline Transport .....	1	0	0	20	22	17	20	28	19	18
Commercial Helicopter, Other .....	1	0	4	2	6	9	7	12	21	19

**TABLE 7.22**  
**STUDENT CERTIFICATES ISSUED, BY MONTH**  
**1984-1993**

Year	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
<b>Total</b> .....	<b>90,167</b>	<b>86,060</b>	<b>88,706</b>	<b>85,661</b>	<b>82,110</b>	<b>87,427</b>	<b>88,586</b>	<b>82,205</b>	<b>78,377</b>	<b>68,960</b>
January .....	7,485	6,414	6,641	6,098	5,410	7,789	6,699	5,704	6,104	4,802
February .....	6,338	5,233	5,590	6,543	6,157	7,156	6,266	5,541	5,773	5,144
March .....	7,086	6,809	6,472	7,125	7,133	6,833	7,372	5,950	6,773	5,835
April .....	6,931	7,492	7,488	7,139	6,606	6,059	7,044	6,513	6,703	5,507
May .....	7,784	7,749	7,415	6,164	7,014	6,870	7,604	6,622	6,299	5,597
June .....	8,533	8,279	8,211	8,491	8,539	8,675	8,284	7,932	7,819	6,683
July .....	9,202	9,249	9,648	8,973	7,796	8,305	9,037	8,442	8,074	6,758
August .....	9,559	8,892	8,886	8,389	8,981	8,976	9,155	8,580	7,210	7,191
September .....	7,781	7,973	8,961	8,109	7,624	8,080	7,509	7,630	7,251	6,343
October .....	8,129	7,892	8,133	7,585	7,133	7,616	8,103	7,956	6,760	15,800
November .....	6,291	5,579	5,809	5,912	6,086	6,203	6,551	7,661	5,240	15,100
December .....	5,048	4,499	5,452	5,133	3,631	4,865	4,962	3,674	4,371	14,200



## VIII. GENERAL AVIATION AIRCRAFT

General aviation aircraft activity information was obtained using the General Aviation Activity and Avionics Survey, which is mailed to the owners of a sample of registered general aviation aircraft. The sample is a scientifically designed random sample which represents all general aviation aircraft registered in the United States.

The survey collects data relative to flight hours, airframe hours and the avionics equipment on board the aircraft. In addition, the survey collects information about the number of hours flown under instrument flight rules, fuel consumption rates, and the state where the aircraft is based.

The estimates for 1991 were adjusted to reflect the effects on nonrespondents. A survey of nonrespondents to the 1990 survey found that the proportion of nonrespondents that were active was less than that of the respondents. It also found that if the aircraft was active it flew about the same number of annual hours as the respondent's aircraft.

Because the estimates are derived from a sample—not the total population of aircraft—a certain amount of sampling error is introduced. The user must consider this error along with the estimate itself when making an inference or drawing any conclusions about the aircraft population. Although the exact value of the sample error is unknown, a quantity known as the standard error is used to approximate it. Using the standard error, one can develop an interval within which the true population estimate will lie with a known probability. The probability that the true value lies within the interval depends on the width of the interval, i.e., the estimate plus or minus 1, 2, or 3 times the standard error. The table below shows selected interval widths and their corresponding confidence.

Width of Interval	Approximate Confidence That Interval Includes True Value
1 standard error	68%
2 standard errors	95%
3 standard errors	99%

For example, if the estimate for the total number of active piston powered rotorcraft were 2,658 and the standard error was 176, then the 95% confidence interval would be  $2,658 + 2(176)$  or (2306, 3010). One would say that there is a 95% chance that the number of active piston powered rotorcraft lies between 2306 and 3010.

In some tables, the standard error is expressed as a percent. To calculate the standard error, multiply the estimated by the percentage. To derive the 95% confidence interval, proceed as before. For example, if total hours flown were 35,792 thousand hours and the percentage standard error was 3.0%, the 95% confidence interval would be:

$$35,792 + (2 \times 3\% \times 35,792) = 35,792 \pm 2148 = (33,644; 37,940)$$

The standard error, percent standard error, or a code for the standard error is shown for each estimate made from the sample in this chapter.

More detailed estimates and more detailed discussion of the survey and its methodology are available in *General Aviation/Air Taxi Activity and Avionics Survey*.

**TABLE 8.1**  
**ACTIVE GENERAL AVIATION AIRCRAFT**  
**BY AIRCRAFT TYPE AND PRIMARY USE: 1993**  
 Excludes Commuters  
 (Percent standard error is shown in parenthesis)

Aircraft Type	Total	Corporate	Business	Personal	Instruc-tional	Aerial Applica-tion	Aerial Observa-tion	Sight Seeing	External Load	Other Work	Air Taxi	Other
<b>Fixed-Wing—Total .....</b>	<b>155,312</b>	<b>9,169</b>	<b>26,755</b>	<b>89,444</b>	<b>14,719</b>	<b>4,443</b>	<b>3,600</b>	<b>557</b>	<b>0</b>	<b>786</b>	<b>3,183</b>	<b>2656</b>
	(0.7%)	(3.7%)	(3.1%)	(1.2%)	(4.6%)	(3.8%)	(9.9%)	(24.8%)	(0.0%)	(17.8%)	(8.4%)	(10.5%)
<b>Piston—Total .....</b>	<b>147,094</b>	<b>3,388</b>	<b>26,270</b>	<b>89,053</b>	<b>14,654</b>	<b>4,154</b>	<b>3,585</b>	<b>551</b>	<b>0</b>	<b>774</b>	<b>2,338</b>	<b>2,326</b>
	(0.8%)	(8.9%)	(32.0%)	(1.2%)	(4.6%)	(4.1%)	(10.0%)	(25.0%)	(0.0%)	(17.9%)	(10.8%)	(11.7%)
One Engine .....	130,687	1,201	20,966	83,978	13,518	3,899	3,179	529	0	707	736	1,974
	(0.8%)	(17.2%)	(3.7%)	(1.2%)	(4.9%)	(3.9%)	(10.8%)	(25.9%)	(0.0%)	(19.1%)	(21.5%)	(12.9%)
Two Engine .....	16,388	2,186	5,302	5,075	1,137	248	406	19	0	66	1,601	347
	(2.1%)	(10.1%)	(6.2%)	(63.1%)	(14.1%)	(29.9%)	(24.2%)	(82.3%)	(0.0%)	(48.2%)	(12.2%)	(28.2%)
Other Piston .....	18	0	2	0	0	7	0	3	0	1	0	5
	(40.7%)	(0.0%)	(85.1%)	(0.0%)	(0.0%)	(44.1%)	(0.0%)	(70.0%)	(0.0%)	*	(0.0%)	55.3
<b>Turboprop—Total .....</b>	<b>4,359</b>	<b>2,540</b>	<b>380</b>	<b>326</b>	<b>53</b>	<b>288</b>	<b>13</b>	<b>5</b>	<b>0</b>	<b>12</b>	<b>552</b>	<b>190</b>
	(3.3)	(4.8)	(19.9)	(25.7)	(44.2)	(8)	(98.4)	(72.4)	(0)	*	(11.7)	(26.4)
One Engine .....	703	9	38	36	38	266	0	0	0	4	276	35
	(6.8%)	*	(49.8%)	(53.7%)	(42.3%)	(8.5%)	(0.0%)	(0.0%)	(0.0%)	*	(8.3%)	(60.6%)
Two Engine .....	3,632	2,531	341	290	15	2	13	5	0	7	276	152
	(3.8%)	(4.7%)	(21.5%)	(28.2%)	*	*	(98.4%)	(72.4%)	(0.0%)	(56.7%)	(22.0%)	(29.9%)
Other Turboprop .....	24	0	0	0	1	20	0	0	0	0	0	3
	(41.0%)	(0.0%)	(0.0%)	(0.0%)	*	(16.1%)	(0.0%)	(0.0%)	(0.0%)	(0.0%)	(0.0%)	(96.7%)
<b>Turbojet—Total .....</b>	<b>3,859</b>	<b>3,242</b>	<b>106</b>	<b>65</b>	<b>11</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>294</b>	<b>140</b>
	(2.8%)	(2.6%)	(38.2%)	(41.5%)	(94.2%)	(0.0%)	*	(0.0%)	(0.0%)	(0.0%)	(21.2%)	(30.4%)
Two Engine .....	3,673	3,090	103	56	11	0	2	0	0	0	292	119
	(2.9%)	(2.7%)	(39.2%)	(47.6%)	(94.2%)	(0.0%)	*	(0.0%)	(0.0%)	(0.0%)	(21.3%)	(35.7%)
Other Turbojet .....	186	152	3	9	0	0	0	0	0	0	2	21
	(11.8%)	(3.0%)	(51.6%)	(49.3%)	(0.0%)	(0.0%)	(0.0%)	(0.0%)	(0.0%)	(0.0%)	*	(11.3%)
<b>Rotorcraft—Total .....</b>	<b>4,510</b>	<b>508</b>	<b>318</b>	<b>487</b>	<b>430</b>	<b>470</b>	<b>969</b>	<b>241</b>	<b>144</b>	<b>29</b>	<b>580</b>	<b>335</b>
	(3.4%)	(17.8%)	(21.1%)	(12.4%)	(14.0%)	(13.9%)	(11.8%)	(26.8%)	(31.3%)	(80.0%)	(14.4%)	(19.9%)
Piston .....	1,646	14	164	389	363	270	291	80	12	4	9	48
	(6.3%)	(69.7%)	(21.9%)	(12.8%)	(13.0%)	(16.4%)	(17.0%)	(36.5%)	(48.8%)	*	*	(28.9%)
<b>Turbine-total .....</b>	<b>2,864</b>	<b>493</b>	<b>154</b>	<b>98</b>	<b>66</b>	<b>200</b>	<b>678</b>	<b>160</b>	<b>133</b>	<b>25</b>	<b>571</b>	<b>287</b>
	(4.0%)	(18.2%)	(36.8%)	(35.3%)	(55.6%)	(24.1%)	(15.2%)	(35.8%)	(33.7%)	(88.8%)	(14.5%)	(22.7%)
One Engine .....	2,144	343	152	91	61	169	629	160	113	18	243	165
	(5.0%)	(24.0%)	(37.2%)	(36.4%)	(59.1%)	(27.7%)	(16.0%)	(35.8%)	(39.1%)	*	(30.3%)	(35.7%)
Multi-engine .....	720	150	2	7	6	31	48	0	20	8	328	121
	(5.3%)	(23.8%)	*	*	*	(36.6%)	(46.2%)	*	(35.3%)	*	(11.7%)	(22.4%)
Glinters .....	1,645	2	11	1,360	163	0	0	69	0	6	0	35
	(6.9%)	*	*	(4.6%)	(30.1%)	(0.0%)	(0.0%)	(47.8%)	(0.0%)	*	(0.0%)	(68.2%)
Lighter-than-Air .....	3,602	2	52	2,408	121	0	28	747	0	102	0	143
	(5.7%)	*	(80.8%)	(6.9%)	(52.2%)	(0.0%)	*	(19.1%)	(0.0%)	(57.1%)	(0.0%)	(48.0%)
Experimental-Home Built ...	6,854	0	340	5,912	58	0	7	1	0	18	0	518
	(5.9%)	(0.0%)	(37.0%)	(3.4%)	(91.5%)	(0.0%)	*	*	(0.0%)	*	(0.0%)	(29.6%)
Experimental-Exhibition .....	1,622	0	7	1,286	15	1	1	1	0	9	0	301
	(7.4%)	*	*	(5.9%)	*	*	*	*	(0.0%)	*	(0.0%)	(24.3%)
Experimental-Other .....	2,462	175	328	1,249	101	66	199	10	3	89	0	241
	(5.0%)	(36.2%)	(25.6%)	(9.9%)	(48.4%)	(60.6%)	(33.8%)	*	*	(51.8%)	(0.0%)	(30.5%)
<b>Total All Aircraft .....</b>	<b>176,006</b>	<b>9,855</b>	<b>27,811</b>	<b>102,146</b>	<b>15,608</b>	<b>4,979</b>	<b>4,804</b>	<b>1,626</b>	<b>147</b>	<b>1,039</b>	<b>3,764</b>	<b>4,228</b>
	(0.7%)	(3.6%)	(3.1%)	(1.1%)	(4.4%)	(3.8%)	(8.0%)	(13.0%)	(31.2%)	(15.7%)	(7.4%)	(8.3%)

1993 Use Categories Changes: Beginning in 1993, Commuters were excluded from the survey. External Load and Sight Seeing were created as separate categories. Prior to 1993 they were included in one of the other nine categories as appropriate.

1993 New Aircraft Types: Prior to 1993, Single engine turboprops were included in Other turboprops, Single and multi engine rotorcraft were not shown separately, Gliders and lighter-than-air aircraft were combined into the Other type, Experimental aircraft were included in the appropriate aircraft type. For example, prior to 1993 the single engine piston aircraft type included both experimental and non experimental aircraft. Starting in 1993 that aircraft type includes only the non experimental.

\* Standard error greater than 100%.

NOTE: Columns may not add to totals due to rounding and estimation procedures.

**TABLE 8.2**  
**ACTIVE GENERAL AVIATION AIRCRAFT**  
**BY AIRCRAFT TYPE 1984-1993**  
(Percent Standard error is shown in parenthesis)

Aircraft Type	1993	1992	1991	1990 <sup>1</sup>	1989 <sup>1</sup>	1988 <sup>1</sup>	1987 <sup>1</sup>	1986 <sup>1</sup>	1985 <sup>1</sup>	1984
<b>Fixed-Wing—Total</b> .....	<b>155,312</b> (0.7%)	<b>170,844</b> (0.7%)	<b>184,620</b> (0.7%)	<b>184.5</b> (0.5%)	<b>190.8</b> (0.5%)	<b>183.8</b> (0.6%)	<b>190.5</b> (0.5%)	<b>192.3</b> (0.5%)	<b>184.7</b> (0.6%)	<b>207,571</b> (0.5%)
<b>Piston—Total</b> .....	<b>147,094</b> (0.8%)	<b>162,117</b> (7.0%)	<b>175,347</b> (0.7%)	<b>175.2</b> (0.6%)	<b>180.8</b> (0.5%)	<b>175.0</b> (0.6%)	<b>181.5</b> (0.5%)	<b>182.5</b> (0.6%)	<b>175.6</b> (0.6%)	<b>197,442</b> (0.5%)
One Engine .....	130,687 (0.8%)	143,580 (0.8%)	154,102 (0.8%)	154.0 (0.6%)	158.9 (0.6%)	153.7 (0.6%)	159.7 (0.6%)	160.3 (0.6%)	153.4 (0.7%)	171,922 (0.5%)
Two Engine .....	16,388 (2.1%)	18,451 (1.7%)	21,119 (1.7%)	21.1 (1.3%)	21.8 (1.2%)	21.2 (1.4%)	21.7 (1.3%)	22.1 (1.6%)	22.1 (1.5%)	25,258 (1.2%)
Other Piston .....	18 (40.7%)	86 (17.7%)	127 (22.2%)	0.1 (30.0%)	0.1 (33.8%)	0.1 (21.7%)	0.1 (25.0%)	0.1 (24.3%)	0.1 (20.9%)	262 (13.4%)
<b>Turboprop—Total</b> .....	<b>4359</b> (3.3%)	<b>4,704</b> (3.1%)	<b>4,920</b> (2.7%)	<b>5.3</b> (1.8%)	<b>5.9</b> (1.5%)	<b>4.9</b> (1.7%)	<b>4.9</b> (1.9%)	<b>5.6</b> (1.9%)	<b>5.0</b> (2.1%)	<b>5,809</b> (1.0%)
One Engine .....	703 (6.8%)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Two Engine .....	3,632 (3.8%)	4,094 (3.5%)	4,398 (3.0%)	4.9 (1.8%)	5.7 (1.5%)	4.7 (1.8%)	4.7 (1.9%)	5.4 (1.9%)	4.9 (2.1%)	5,633 (1.0%)
Other Turboprop .....	24 (41.0%)	610 (3.0%)	522 (2.4%)	0.4 (7.0%)	0.2 (14.2%)	0.2 (7.1%)	0.2 (8.9%)	0.2 (16.2%)	0.1 (7.8%)	176 (8.5%)
<b>Turbojet—Total</b> .....	<b>3,859</b> (2.8%)	<b>4,022</b> (2.4%)	<b>4,353</b> (2.0%)	<b>4.1</b> (2.0%)	<b>4.1</b> (1.5%)	<b>3.9</b> (2.0%)	<b>4.0</b> (1.5%)	<b>4.2</b> (2.2%)	<b>4.1</b> (1.7%)	<b>4,320</b> (1.6%)
Two Engine .....	3,673 (2.9%)	3,790 (2.3%)	4,066 (1.9%)	3.7 (2.0%)	3.7 (1.4%)	3.6 (2.1%)	3.6 (1.6%)	3.8 (1.6%)	3.6 (1.7%)	3,780 (1.3%)
Other Turbojet .....	186 (11.8%)	232 (15.3%)	286 (14.4%)	0.4 (8.2%)	0.4 (8.2%)	0.3 (5.5%)	0.4 (5.0%)	0.4 (16.2%)	0.5 (7.2%)	540 (26.9%)
<b>Rotorcraft—Total</b> .....	<b>4,510</b> (3.4%)	<b>5,753</b> (3.8%)	<b>6,292</b> (3.5%)	<b>6.9</b> (3.0%)	<b>7.0</b> (0.6%)	<b>6.0</b> (3.6%)	<b>5.9</b> (3.2%)	<b>6.5</b> (3.1%)	<b>6.0</b> (4.0%)	<b>7,096</b> (3.1%)
Piston .....	1,646 (6.3%)	2,211 (7.7%)	2,470 (7.6%)	3.2 (5.3%)	3.0 (1.2%)	2.4 (7.9%)	2.6 (5.0%)	2.7 (6.0%)	2.7 (7.0%)	2,936 (6.3%)
Turbine .....	2,864 (4.0%)	3,542 (3.9%)	3,822 (2.9%)	3.7 (3.1%)	4.0 (0.4%)	3.6 (2.7%)	3.3 (4.2%)	3.8 (3.1%)	3.3 (4.5%)	4,160 (2.8%)
One Engine .....	2,144 (5.0%)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Multi-engine .....	720 (5.3%)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Gliders .....	1,645 (6.9%)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lighter-than-Air .....	3,602 (5.7%)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Other—Total</b> .....	<b>N/A</b> (1.9%)	<b>7,837</b> (2.9%)	<b>7,563</b> (3.0%)	<b>6.6</b> (2.4%)	<b>7.2</b> (4.1%)	<b>6.4</b> (3.4%)	<b>6.3</b> (3.0%)	<b>6.5</b> (3.3%)	<b>5.8</b> (2.7%)	<b>6,275</b> (2.7%)
Experimental-Home Built ..	6,854 (5.9%)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Experimental-Exhibition ...	1,622 (7.4%)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Experimental-Other .....	2,462 (5.0%)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Total All Aircraft</b> .....	<b>176,006</b> (0.7%)	<b>184,434</b> (0.7%)	<b>198,475</b> (0.7%)	<b>198.0</b> (0.5%)	<b>205.0</b> (0.5%)	<b>196.2</b> (0.5%)	<b>202.7</b> (0.5%)	<b>205.3</b> (0.5%)	<b>196.5</b> (0.6%)	<b>220,943</b> (0.5%)

Beginning in 1993, excludes commuters.

1993 New Aircraft Types: Prior to 1993 Single engine turboprops were included in Other turboprops, Single and multi engine rotorcraft were not shown separately, Gliders and lighter-than-air aircraft were combined into the Other type, Experimental aircraft were included in the appropriate aircraft type. For example, prior to 1993 the single engine piston aircraft type included both experimental and non experimental aircraft. Starting in 1993 that aircraft type includes only the non experimental.

<sup>1</sup> Revised to correct for nonresponse bias.

NOTE: Columns may not add to totals due to rounding and estimation procedures.

**TABLE 8.3**  
**ACTIVE GENERAL AVIATION AIRCRAFT**  
**BY PRIMARY USE**  
**1984-1993**  
**(Aircraft in Thousands)**

Use Category	1993	1992	1991	1990 <sup>1</sup>	1989 <sup>1</sup>	1988 <sup>1</sup>	1987 <sup>1</sup>	1986 <sup>1</sup>	1985 <sup>1</sup>	1984
Corporate .....	9.9	9.4	10.0	10.1	11.5	10.2	11.1	11.3	12.7	16.7
Business .....	27.8	28.9	31.6	33.1	35.0	32.6	37.3	40.8	42.5	47.1
Personal .....	102.1	108.7	115.1	112.6	116.4	114.4	115.3	112.2	96.2	105.3
Instructional .....	15.6	16.0	17.9	18.6	16.6	15.6	14.7	14.8	13.4	15.3
Aerial Application .....	5.0	5.1	7.0	6.2	6.6	6.6	6.1	6.6	6.8	7.3
Aerial Observation .....	4.8	5.6	5.1	4.9	5.4	4.4	4.5	4.4	4.2	5.2
Sight Seeing .....	1.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
External Load .....	0.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Other Work .....	1.0	1.7	1.7	1.4	2.0	1.7	1.5	1.2	1.5	1.3
Air Taxi .....	3.8	4.7	5.5	5.8	6.6	6.0	5.8	7.1	6.0	7.3
Other .....	4.2	3.5	3.9	4.1	3.6	3.8	5.5	5.3	5.0	4.8
Rental .....	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7.4	9.4
<b>Sub Total</b> .....	<b>175.9</b>	<b>183.6</b>	<b>197.8</b>	<b>196.8</b>	<b>203.7</b>	<b>195.3</b>	<b>201.8</b>	<b>203.7</b>	<b>195.7</b>	<b>220.9</b>
Commuter Air Taxi .....	N/A	0.8	0.7	1.2	1.3	0.9	0.9	1.6	0.8	1.2
<b>Total</b> .....	<b>175.9</b>	<b>184.4</b>	<b>198.5</b>	<b>198.0</b>	<b>205.0</b>	<b>196.2</b>	<b>202.7</b>	<b>205.3</b>	<b>196.5</b>	<b>222.1</b>

1993 Use Categories Changes: Beginning in 1993, Commuters were excluded from the survey. External Load and Sight Seeing were created as separate categories. Prior to 1993 they were included in one of the other nine categories as appropriate.

<sup>1</sup> Revised to reflect effects or non response.

N/A Rental Hours no longer collected as separate use category.

NOTE: Columns may not add to totals due to rounding and estimation procedures.

**TABLE 8.4**  
**ACTIVE GENERAL AVIATION AIRCRAFT**  
**TOTAL HOURS FLOWN,**  
**BY AIRCRAFT TYPE AND ACTUAL USE: 1993**  
 Excludes Commuters  
 (Percent standard error is shown in parenthesis)

Aircraft Type	Total	Corporate	Business	Personal	Instruc- tional	Aerial Applica- tion	Aerial Observa- tion	Sight Seeing	External Load	Other Work	Air Taxi	Other
<b>Fixed-Wing—Total .....</b>	<b>21,421,226</b>	<b>2,394,454</b>	<b>3,233,431</b>	<b>7,345,915</b>	<b>4,432,889</b>	<b>1,048,555</b>	<b>1,126,898</b>	<b>131,499</b>	<b>0</b>	<b>144,266</b>	<b>1,153,460</b>	<b>409,859</b>
	(1.9%)	(4.4%)	(4.0%)	(2.0%)	(6.5%)	(5.6%)	(17.3%)	(34.8%)	(0.0%)	(20.6%)	(10.3%)	(12.9%)
<b>Piston—Total .....</b>	<b>19,029,404</b>	<b>701,261</b>	<b>3,160,960</b>	<b>7,285,755</b>	<b>4,416,000</b>	<b>946,380</b>	<b>1,123,985</b>	<b>127,520</b>	<b>0</b>	<b>141,482</b>	<b>822,893</b>	<b>303,164</b>
	(2.1%)	(10.6%)	(4.0%)	(2.0%)	(6.5%)	(6.0%)	(17.3%)	(35.6%)	(0.0%)	(20.8%)	(13.3%)	(15.6%)
One Engine .....	16,514,183	274,741	2,493,462	6,767,393	4,135,458	924,226	1,031,811	122,370	0	126,243	362,774	275,703
	(2.4%)	(19.4%)	(4.7%)	(2.0%)	(6.8%)	(6.0%)	(18.6%)	(36.7%)	(0.0%)	(21.5%)	(25.0%)	(16.7%)
Two Engine .....	2,514,305	426,520	667,439	518,363	280,543	21,749	92,173	4,923	0	15,183	460,119	27,292
	(3.9%)	(12.4%)	(7.5%)	(8.1%)	(15.8%)	(21.6%)	(27.7%)	*	(0.0%)	(83.6%)	(14.3%)	(40.2%)
Other Piston .....	914	0	59	0	0	404	0	226	0	55	0	168
	(42.8%)	(0.0%)	(85.1%)	(0.0%)	(0.0%)	(44.2%)	(0.0%)	(72.2%)	(0.0%)	*	(0.0%)	(65.4%)
<b>Turboprop—Total .....</b>	<b>1,226,508</b>	<b>711,822</b>	<b>55,217</b>	<b>46,456</b>	<b>13,474</b>	<b>102,176</b>	<b>2,838</b>	<b>3,979</b>	<b>0</b>	<b>2,784</b>	<b>212,747</b>	<b>75,015</b>
	(5.6%)	(6.5%)	(27.1%)	(31.2%)	(80.0%)	(12.7%)	*	(90.7%)	(0.0%)	*	(14.1%)	(27.6%)
One Engine .....	244,210	1,929	5,344	3,970	8,261	99,073	0	0	0	1,137	120,163	4,332
	(11.3%)	*	(53.3%)	(55.3%)	(82.3%)	(13.0%)	(0.0%)	(0.0%)	(0.0%)	*	(15.1%)	(68.1%)
Two Engine .....	979,020	709,893	49,873	42,486	5,110	117	2,838	3,979	0	1,647	92,584	70,492
	(6.4%)	(6.5%)	(29.6%)	(34.1%)	*	*	*	(90.7%)	(0.0%)	(51.0%)	(22.5%)	(31.3%)
Other Turboprop .....	3,279	0	0	0	103	2,985	0	0	0	0	0	190
	(42.6%)	(0.0%)	(0.0%)	(0.0%)	*	(18.2%)	(0.0%)	(0.0%)	(0.0%)	(0.0%)	(0.0%)	(96.7%)
<b>Turbojet—Total .....</b>	<b>1,165,319</b>	<b>981,371</b>	<b>17,255</b>	<b>13,703</b>	<b>3,414</b>	<b>0</b>	<b>75</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>117,820</b>	<b>31,680</b>
	(4.7%)	(4.4%)	(44.4%)	(47.7%)	*	(0.0%)	(0.0%)	(0.0%)	(23.6%)	(34.7%)	*	*
Two Engine .....	1,126,047	944,688	17,167	13,153	3,414	0	75	0	0	0	117,478	30,070
	(4.8%)	(4.5%)	(45.4%)	(53.8%)	*	(0.0%)	*	(0.0%)	(0.0%)	(0.0%)	(23.7%)	(39.9%)
Other Turbojet .....	39,272	36,683	87	550	0	0	0	0	0	0	342	1,610
	(15.5%)	(8.9%)	(59.6%)	(77.7%)	(0.0%)	(0.0%)	(0.0%)	(0.0%)	(0.0%)	(0.0%)	*	(30.8%)
<b>Rotorcraft—Total .....</b>	<b>1,832,306</b>	<b>193,656</b>	<b>57,000</b>	<b>39,833</b>	<b>181,277</b>	<b>111,355</b>	<b>554,152</b>	<b>131,859</b>	<b>104,082</b>	<b>7,471</b>	<b>298,062</b>	<b>153,557</b>
	(6.3%)	(20.7%)	(34.7%)	(16.8%)	(16.8%)	(17.4%)	(15.6%)	(33.2%)	(39.1%)	(89.3%)	(17.4%)	(25.7%)
Piston .....	370,103	1,658	11,842	29,842	138,305	56,443	103,564	20,657	1,335	673	1,989	3,793
	(8.7%)	(70.1%)	(23.7%)	(17.6%)	(15.2%)	(18.5%)	(20.8%)	(39.5%)	(75.2%)	*	*	(30.1%)
<b>Turbine—Total .....</b>	<b>1,462,206</b>	<b>191,999</b>	<b>45,158</b>	<b>9,992</b>	<b>42,972</b>	<b>54,912</b>	<b>450,588</b>	<b>111,203</b>	<b>102,748</b>	<b>6,799</b>	<b>296,073</b>	<b>149,764</b>
	(7.6%)	(21.1%)	(49.4%)	(45.2%)	(64.4%)	(31.9%)	(19.6%)	(43.1%)	(40.9%)	(99.2%)	(17.6%)	(28.3%)
One Engine .....	1,072,604	123,944	44,807	8,353	40,292	48,738	429,602	111,191	70,925	4,075	126,082	64,596
	(9.5%)	(28.7%)	(49.8%)	(48.6%)	(67.5%)	(34.7%)	(20.1%)	(43.1%)	(20.0%)	*	(34.9%)	(54.4%)
Multi-engine .....	389,602	68,055	351	1,639	2,681	6,174	20,986	12	31,823	2,723	169,991	85,168
	(10.8%)	(24.2%)	*	*	*	(44.9%)	(47.1%)	*	(40.3%)	*	(14.9%)	(20.2%)
Gliders .....	159,092	96	332	82,605	47,495	0	0	24,198	0	551	0	3,814
	(17.1%)	*	*	(11.0%)	(36.4%)	(0.0%)	(0.0%)	(57.3%)	(0.0%)	*	(0.0%)	(69.8%)
Lighter-than-Air .....	216,633	12	840	65,627	3,730	0	7,069	119,529	0	12,529	0	7,296
	(30.2%)	*	(96.6%)	(9.7%)	(61.1%)	(0.0%)	*	(49.6%)	(0.0%)	(63.6%)	(0.0%)	(58.0%)
Experimental-Home Built ..	298,339	0	20,246	259,462	3,960	0	303	20	0	124	0	14,226
	(9.0%)	(0.0%)	(45.0%)	(7.8%)	(95.6%)	(0.0%)	*	*	(0.0%)	*	(0.0%)	(32.9%)
Experimental-Exhibition ....	87,679	9	447	75,482	521	159	84	37	0	1,038	0	9,901
	(18.2%)	*	*	(19.3%)	*	*	*	*	(0.0%)	*	(0.0%)	(34.4%)
Experimental-Other .....	324,608	70,577	33,093	69,463	10,451	7,082	61,423	4,701	1,023	9,267	0	57,527
	(15.0%)	(47.5%)	(31.1%)	(13.8%)	(62.3%)	(64.5%)	(42.9%)	*	*	(70.9%)	(0.0%)	(43.0%)
<b>Total All Aircraft .....</b>	<b>24,339,884</b>	<b>2,658,805</b>	<b>3,345,390</b>	<b>7,938,388</b>	<b>4,680,323</b>	<b>1,167,150</b>	<b>1,749,930</b>	<b>411,845</b>	<b>105,106</b>	<b>175,247</b>	<b>1,451,522</b>	<b>656,179</b>
	(1.8%)	(4.4%)	(3.9%)	(1.9%)	(6.2%)	(5.4%)	(12.6%)	(21.1%)	(38.9%)	(18.0%)	(9.0%)	(10.0%)

1993 Use Categories Changes: Beginning in 1993, Commuters were excluded from the survey. External Load and Sight Seeing were created as separate categories. Prior to 1993 they were included in one of the other nine categories as appropriate.

1993 New Aircraft Types: Prior to 1993 Single engine turboprops were included in Other turboprops. Single and multi engine rotorcraft were not shown separately. Gliders and lighter-than-air aircraft were combined into the Other type. Experimental aircraft were included in the appropriate aircraft type. For example, prior to 1993 the single engine piston aircraft type included both experimental and non experimental aircraft. Starting in 1993 that aircraft type includes only the non experimental.

\* Standard error greater than 100%.

NOTE: Columns may not add to totals due to rounding and estimation procedures.

**TABLE 8.5**  
**ACTIVE GENERAL AVIATION AIRCRAFT**  
**TOTAL HOURS FLOWN**  
**BY AIRCRAFT TYPE 1984-1993**  
(Hours in Thousands)  
(Percent Standard error is shown in parenthesis)

Aircraft Type	1993	1992	1991	1990 <sup>1</sup>	1989 <sup>1</sup>	1988 <sup>1</sup>	1987 <sup>1</sup>	1986 <sup>1</sup>	1985 <sup>1</sup>	1984
<b>Fixed-Wing—Total</b> .....	<b>21,421</b> (1.9%)	<b>23,801</b> (1.7%)	<b>26,851</b> (1.9%)	<b>29,546</b> (1.8%)	<b>29,327</b> (1.7%)	<b>28,040</b> (1.8%)	<b>28,391</b> (1.7%)	<b>28,994</b> (1.7%)	<b>29,085</b> (1.7%)	<b>33,265</b> (2.1%)
<b>Piston—Total</b> .....	<b>19,029</b> (2.1%)	<b>21,251</b> (1.9%)	<b>24,102</b> (2.1%)	<b>25,832</b> (2.0%)	<b>24,907</b> (1.9%)	<b>24,291</b> (2.0%)	<b>24,969</b> (1.9%)	<b>24,805</b> (1.9%)	<b>25,666</b> (1.9%)	<b>29,194</b> (1.8%)
One Engine .....	16,514 (2.4%)	18,074 (2.1%)	20,540 (2.3%)	21,883 (2.2%)	20,600 (2.2%)	20,326 (2.2%)	20,446 (2.0%)	20,260 (2.1%)	21,102 (2.1%)	23,506 (2.1%)
Two Engine .....	2,514 (3.9%)	3,172 (3.9%)	3,555 (4.1%)	3,897 (3.8%)	4,292 (3.3%)	3,943 (4.1%)	4,509 (5.2%)	4,535 (4.6%)	4,539 (4.1%)	5,585 (3.6%)
Other Piston .....	1 (42.8%)	4 (22.6%)	7 (33.5%)	53 (48.7%)	16 (67.3%)	20 (44.5%)	14 (33.3%)	10 (45.5%)	24 (34.6%)	102 (29.4%)
<b>Turboprop—Total</b> .....	<b>1,227</b> (5.6%)	<b>1,478</b> (5.7%)	<b>1,513</b> (5.3%)	<b>2,319</b> (6.4%)	<b>2,892</b> (5.0%)	<b>2,195</b> (5.0%)	<b>2,010</b> (5.0%)	<b>2,661</b> (5.1%)	<b>1,921</b> (4.6%)	<b>2,506</b> (4.7%)
One Engine .....	244 (11.3%)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Two Engine .....	979 (6.4%)	1,238 (6.5%)	1,359 (5.8%)	2,162 (6.8%)	2,776 (5.2%)	2,117 (5.1%)	1,841 (5.0%)	2,583 (5.3%)	1,862 (4.8%)	2,452 (4.7%)
Other Turboprop .....	3 (42.6%)	240 (10.2%)	154 (12.8%)	157 (10.9%)	116 (16.6%)	78 (14.9%)	169 (24.6%)	78 (14.1%)	59 (10.9%)	54 (25.9%)
<b>Turbojet—Total</b> .....	<b>1,165</b> (4.7%)	<b>1,072</b> (4.2%)	<b>1,236</b> (4.5%)	<b>1,396</b> (4.1%)	<b>1,527</b> (3.7%)	<b>1,554</b> (4.4%)	<b>1,411</b> (3.9%)	<b>1,527</b> (4.7%)	<b>1,498</b> (4.4%)	<b>1,566</b> (4.7%)
Two Engine .....	1,126 (4.8%)	1,030 (4.3%)	1,183 (4.7%)	1,279 (4.3%)	1,424 (3.9%)	1,434 (4.7%)	1,312 (4.2%)	1,446 (4.9%)	1,349 (4.8%)	1,328 (5.0%)
Other Turbojet .....	39 (15.5%)	42 (16.4%)	54 (15.1%)	117 (12.2%)	103 (12.2%)	120 (10.9%)	99 (10.3%)	90 (19.4%)	149 (10.6%)	237 (13.9%)
<b>Rotorcraft—Total</b> .....	<b>1,832</b> (6.3%)	<b>2,283</b> (6.6%)	<b>2,757</b> (7.5%)	<b>2,209</b> (5.9%)	<b>2,610</b> (6.5%)	<b>2,507</b> (6.5%)	<b>2,108</b> (7.4%)	<b>2,424</b> (6.7%)	<b>1,990</b> (7.7%)	<b>2,495</b> (5.5%)
Piston .....	370 (8.7%)	416 (12.4%)	585 (12.0%)	716 (10.2%)	692 (2.1%)	533 (11.6%)	602 (9.2%)	742 (12.8%)	521 (15.1%)	592 (11.3%)
Turbine .....	1,462 (7.6%)	1,866 (7.6%)	2,172 (9.0%)	1,493 (7.2%)	1,918 (0.9%)	1,974 (7.6%)	1,506 (9.6%)	1,682 (7.7%)	1,468 (8.9%)	1,903 (6.4%)
One Engine .....	1,073 (9.5%)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Multi-engine .....	390 (10.8%)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Glinters .....	159 (17.1%)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lighter-than-Air .....	217 (30.2%)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Other—Total</b> .....	<b>N/A</b>	<b>410</b> (6.0%)	<b>459</b> (8.9%)	<b>341</b> (7.0%)	<b>396</b> (7.4%)	<b>568</b> (24.2%)	<b>384</b> (6.0%)	<b>364</b> (7.6%)	<b>382</b> (8.2%)	<b>358</b> (6.7%)
Experimental-Home Built ..	298 (9.0%)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Experimental-Exhibition ...	88 (18.2%)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Experimental-Other .....	325 (15.0%)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Total All Aircraft</b> .....	<b>24,340</b> (1.8%)	<b>26,493</b> (1.6%)	<b>30,067</b> (1.8%)	<b>32,096</b> (1.7%)	<b>32,332</b> (1.6%)	<b>31,114</b> (1.7%)	<b>30,883</b> (1.7%)	<b>31,782</b> (1.6%)	<b>31,456</b> (1.6%)	<b>36,119</b> (1.6%)

Beginning in 1993, excludes commuters.  
1993 New Aircraft Types: Prior to 1993 Single engine turboprops were included in Other turboprops, Single and multi engine rotorcraft were not shown separately, Gliders and lighter-than-air aircraft were combined into the Other type, Experimental aircraft were included in the appropriate aircraft type. For example, prior to 1993 the single engine piston aircraft type included both experimental and non experimental aircraft. Starting in 1993 that aircraft type includes only the non experimental.

<sup>1</sup> Revised to correct for nonresponse bias.

NOTE: Columns may not add to totals due to rounding and estimation procedures.

**TABLE 8.6**  
**ACTIVE GENERAL AVIATION AIRCRAFT**  
**TOTAL HOURS FLOWN**  
**BY USE 1984-1993**  
(Hours in Thousands)

Aircraft Type	1993	1992	1991	1990 <sup>1</sup>	1989 <sup>1</sup>	1988 <sup>1</sup>	1987 <sup>1</sup>	1986 <sup>1</sup>	1985 <sup>1</sup>	1984
Corporate .....	2,659	2,262	2,617	2,913	3,453	3,472	3,143	3,491	3,857	4,773
Business .....	3,345	3,537	4,154	4,417	4,330	4,594	5,276	5,444	6,034	6,635
Personal .....	7,938	8,592	9,685	9,276	9,537	10,015	9,961	9,324	7,750	8,417
Instructional .....	4,680	5,340	6,141	7,244	5,993	4,917	4,529	4,319	3,938	4,553
Aerial Application .....	1,167	1,296	1,911	1,872	1,868	1,842	1,538	1,833	2,002	2,008
Aerial Observation .....	1,750	1,730	1,797	1,745	1,719	1,308	1,304	1,496	1,214	1,314
Sight Seeing .....	412	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
External Load .....	105	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Other Work .....	175	343	471	572	517	525	350	298	317	312
Air Taxi .....	1,452	2,009	2,241	2,249	3,020	2,632	2,657	2,690	2,570	3,019
Other .....	656	358	473	475	507	774	871	868	767	729
Rental .....	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2,385	2,854
<b>Sub Total</b> .....	<b>24,340</b>	<b>25,800</b>	<b>29,497</b>	<b>30,763</b>	<b>30,940</b>	<b>30,078</b>	<b>29,628</b>	<b>29,764</b>	<b>30,833</b>	<b>34,615</b>
Commuter Air Taxi .....	N/A	693	570	1,333	1,392	1,036	1,255	2,018	623	1,504
<b>Total</b> .....	<b>24,340</b>	<b>26,493</b>	<b>30,067</b>	<b>32,096</b>	<b>32,332</b>	<b>31,114</b>	<b>30,883</b>	<b>31,782</b>	<b>31,456</b>	<b>36,119</b>

1993 Use Categories Changes: Beginning in 1993, Commuters were excluded from the survey. External Load and Sight Seeing were created as separate categories. Prior to 1993 they were included in one of the other nine categories as appropriate.

<sup>1</sup> Revised to reflect effects or non response.

N/A Rental Hours no longer collected as separate use category.

NOTE: Columns may not add to totals due to rounding and estimation procedures.

**TABLE 8.7**  
**ACTIVE GENERAL AVIATION AIRCRAFT**  
**AVERAGE HOURS FLOWN**  
**BY AIRCRAFT TYPE 1984-1993**  
(Percent Standard error is shown in parenthesis)

Aircraft Type	1993	1992	1991	1990 <sup>1</sup>	1989 <sup>1</sup>	1988 <sup>1</sup>	1987 <sup>1</sup>	1986 <sup>1</sup>	1985 <sup>1</sup>	1984
<b>Fixed-Wing—Total</b> .....	<b>135.3</b> (1.9%)	<b>136.7</b> (1.8%)	<b>143.8</b> (1.9%)	<b>160.1</b> (1.8%)	<b>153.7</b> (1.7%)	<b>152.6</b> (1.8%)	<b>149.0</b> (1.7%)	<b>150.8</b> (1.7%)	<b>157.5</b> (1.7%)	<b>156.0</b> (1.7%)
<b>Piston—Total</b> .....	<b>129.3</b> (3.1%)	<b>130.4</b> (2.0%)	<b>137.5</b> (2.0%)	<b>147.4</b> (1.9%)	<b>137.8</b> (1.9%)	<b>138.8</b> (1.9%)	<b>137.6</b> (1.8%)	<b>135.9</b> (1.8%)	<b>146.2</b> (1.8%)	<b>147.1</b> (1.8%)
One Engine .....	126.9 (2.3%)	126.1 (2.2%)	134.2 (2.2%)	142.1 (2.2%)	129.6 (2.2%)	132.2 (2.2%)	128.0 (2.0%)	126.4 (2.0%)	137.6 (2.0%)	137.0 (2.0%)
Two Engine .....	150.8 (3.4%)	170.3 (3.9%)	167.0 (3.8%)	184.7 (3.8%)	196.9 (3.1%)	186.0 (3.5%)	207.8 (5.1%)	205.2 (4.4%)	205.4 (3.8%)	218.0 (3.2%)
Other Piston .....	49.6 (13.1%)	49.6 (26.5%)	41.3 (26.1%)	526.4 (30.6%)	157.0 (24.9%)	203.8 (42.2%)	138.5 (22.7%)	101.6 (45.4%)	240.1 (27.0%)	433.0 (24.8%)
<b>Turboprop—Total</b> .....	<b>277.5</b> (4.7%)	<b>314.1</b> (4.8%)	<b>307.7</b> (4.3%)	<b>437.5</b> (4.4%)	<b>490.2</b> (4.3%)	<b>448.0</b> (4.5%)	<b>410.3</b> (4.7%)	<b>475.3</b> (4.5%)	<b>384.2</b> (4.2%)	<b>414.2</b> (4.4%)
One Engine .....	342.5 (8.4%)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Two Engine .....	265.4 (5.5%)	301.2 (5.5%)	311.9 (4.5%)	441.2 (4.7%)	487.0 (4.4%)	450.5 (4.6%)	391.8 (4.7%)	478.3 (4.6%)	379.9 (4.4%)	416.0 (4.5%)
Other Turboprop .....	135.3 (11.6%)	381.6 (1.1%)	279.2 (14.0%)	392.5 (8.3%)	581.8 (13.7%)	389.0 (16.7%)	845.0 (24.5%)	392.5 (13.8%)	591.0 (6.0%)	339.0 (17.2%)
<b>Turbojet—Total</b> .....	<b>298.4</b> (3.5%)	<b>270.7</b> (3.6%)	<b>289.7</b> (4.0%)	<b>340.6</b> (3.7%)	<b>372.5</b> (3.4%)	<b>398.5</b> (3.8%)	<b>352.8</b> (3.6%)	<b>363.7</b> (4.8%)	<b>365.3</b> (4.0%)	<b>353.6</b> (4.0%)
Two Engine .....	302.2 (3.6%)	276.9 (3.7%)	296.7 (4.2%)	345.7 (4.0%)	384.9 (3.6%)	398.3 (4.1%)	364.5 (3.8%)	380.6 (4.8%)	374.8 (4.4%)	348.0 (4.1%)
Other Turbojet .....	213.5 (7.8%)	180.8 (13.4%)	192.0 (7.5%)	293.2 (10.8%)	258.6 (11.5%)	401.4 (10.4%)	247.0 (9.6%)	226.2 (28.0%)	297.4 (5.8%)	392.0 (14.7%)
<b>Rotorcraft—Total</b> .....	<b>398.6</b> (5.6%)	<b>381.7</b> (7.8%)	<b>451.6</b> (7.8%)	<b>320.1</b> (5.5%)	<b>372.8</b> (0.8%)	<b>417.9</b> (6.2%)	<b>357.3</b> (7.0%)	<b>372.9</b> (6.3%)	<b>331.7</b> (6.8%)	<b>343.6</b> (5.4%)
Piston .....	218.8 (6.6%)	184.6 (11.8%)	233.7 (9.0%)	223.7 (8.9%)	230.6 (1.9%)	222.3 (9.0%)	231.6 (7.8%)	275.0 (11.1%)	192.9 (12.8%)	186.0 (9.7%)
Turbine .....	506.0 (6.8%)	491.3 (9.1%)	592.2 (9.6%)	403.6 (6.9%)	479.5 (8.0%)	548.3 (7.6%)	456.4 (9.5%)	442.5 (7.6%)	444.9 (8.0%)	468.0 (6.4%)
One Engine .....	501.8 (8.0%)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Multi-engine .....	525.5 (9.7%)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Gliders .....	96.7 (15.7%)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lighter-than-Air .....	60.1 (29.6%)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Other—Total</b> .....	<b>N/A</b>	<b>50.9</b> (8.2%)	<b>61.4</b> (9.7%)	<b>51.6</b> (6.8%)	<b>55.0</b> (7.5%)	<b>88.7</b> (25.1%)	<b>61.0</b> (5.5%)	<b>56.0</b> (7.5%)	<b>65.9</b> (7.6%)	<b>56.5</b> (6.4%)
Experimental-Home Built ..	43.5 (6.8%)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Experimental-Exhibition ...	54.1 (16.6%)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Experimental-Other .....	131.9 (14.2%)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Total All Aircraft</b> .....	<b>134.4</b> (1.8%)	<b>140.4</b> (1.8%)	<b>149.1</b> (1.8%)	<b>162.1</b> (1.7%)	<b>157.7</b> (1.6%)	<b>158.6</b> (1.7%)	<b>152.4</b> (1.6%)	<b>154.8</b> (1.6%)	<b>160.1</b> (1.6%)	<b>158.1</b> (1.6%)

Beginning in 1993, excludes commuters.

1993 New Aircraft Types: Prior to 1993 Single engine turboprops were included in Other turboprops, Single and multi engine rotorcraft were not shown separately, Gliders and lighter-than-air aircraft were combined into the Other type, Experimental aircraft were included in the appropriate aircraft type. For example, prior to 1993 the single engine piston aircraft type included both experimental and non experimental aircraft. Starting in 1993 that aircraft type includes only the non experimental.

<sup>1</sup> Revised to correct for nonresponse bias.

NOTE: Columns may not add to totals due to rounding and estimation procedures.



**TABLE 8.8**  
**ACTIVE GENERAL AVIATION AIRCRAFT AND HOURS FLOWN**  
**BY FAA REGION AND STATE OF BASED AIRCRAFT**  
 Excludes Commuters  
 1993

FAA Region and State	Active Aircraft		Hours Flown	
	Aircraft	Percent Standard Error	Hours (000)	Percent Standard Error
<b>Total</b> .....	<b>176,006</b>	<b>0.7%</b>	<b>24,337</b>	<b>1.8%</b>
<b>Alaskan—Total</b> .....	<b>5,410</b>	<b>7.2%</b>	<b>699</b>	<b>8.8%</b>
<b>Central—Total</b> .....	<b>10,517</b>	<b>6.0%</b>	<b>1,391</b>	<b>7.6%</b>
Iowa .....	2,328	12.3%	249	15.2%
Kansas .....	2,953	10.7%	416	13.2%
Missouri .....	3,494	10.0%	541	13.8%
Nebraska .....	1,743	13.8%	185	17.1%
<b>Eastern—Total</b> .....	<b>21,222</b>	<b>4.1%</b>	<b>2,527</b>	<b>5.0%</b>
Delaware .....	1,332	15.4%	229	21.6%
District of Columbia .....	24	*	7	*
Maryland .....	2,299	12.2%	285	14.5%
New Jersey .....	3,434	10.0%	470	11.6%
New York .....	5,371	8.0%	517	9.4%
Pennsylvania .....	5,145	8.1%	548	10.5%
Virginia .....	2,764	11.1%	385	13.9%
West Virginia .....	852	21.1%	85	11.9%
<b>Great Lakes—Total</b> .....	<b>32,424</b>	<b>3.2%</b>	<b>3,791</b>	<b>4.0%</b>
Illinois .....	6,160	7.5%	834	9.1%
Indiana .....	3,753	9.5%	528	11.2%
Michigan .....	6,150	7.5%	675	8.6%
Minnesota .....	4,583	8.5%	528	12.1%
North Dakota .....	1,322	15.9%	173	20.7%
Ohio .....	5,620	7.8%	593	8.9%
South Dakota .....	1,001	18.2%	123	26.0%
Wisconsin .....	3,836	9.5%	336	11.9%
<b>New England—Total</b> .....	<b>7,160</b>	<b>7.4%</b>	<b>905</b>	<b>9.1%</b>
Connecticut .....	1,477	15.5%	198	20.8%
Maine .....	1,029	18.8%	116	24.2%
Massachusetts .....	2,691	11.6%	381	14.9%
New Hampshire .....	1,216	16.4%	131	19.1%
Rhode Island .....	284	36.3%	34	41.9%
Vermont .....	464	27.2%	45	37.7%
<b>Northwest Mountain—Total</b> .....	<b>18,259</b>	<b>4.4%</b>	<b>2,403</b>	<b>5.8%</b>
Colorado .....	3,855	9.5%	601	14.0%
Idaho .....	1,797	13.5%	216	17.3%
Montana .....	1,808	13.9%	192	16.7%
Oregon .....	3,789	9.4%	469	11.2%
Utah .....	1,041	18.3%	167	23.6%
Washington .....	5,326	7.9%	688	10.6%
Wyoming .....	645	22.6%	69	28.1%
<b>Southern—Total</b> .....	<b>28,544</b>	<b>3.4%</b>	<b>4,432</b>	<b>4.4%</b>
Alabama .....	2,736	11.4%	336	13.1%
Florida .....	10,498	5.5%	1,912	6.9%
Georgia .....	3,796	9.5%	444	10.5%
Kentucky .....	1,476	15.6%	207	18.0%
Mississippi .....	1,469	15.0%	289	20.9%
North Carolina .....	3,782	9.5%	480	11.5%
Puerto Rico .....	305	32.8%	51	39.4%
South Carolina .....	1,641	14.6%	331	20.5%
Tennessee .....	2,766	11.5%	382	14.1%

**TABLE 8.8—Continued**  
**ACTIVE GENERAL AVIATION AIRCRAFT AND HOURS FLOWN**  
**BY FAA REGION AND STATE OF BASED AIRCRAFT**  
 Excludes Commuters  
**1993**

FAA Region and State	Active Aircraft		Hours Flown	
	Aircraft	Percent Standard Error	Hours (000)	Percent Standard Error
<b>Southwest—Total</b> .....	<b>22,868</b>	<b>3.8%</b>	<b>3,552</b>	<b>4.8%</b>
Arkansas .....	2,415	11.7%	359	14.6%
Louisiana .....	2,255	12.2%	536	15.1%
New Mexico .....	2,120	12.5%	247	17.5%
Oklahoma .....	3,135	10.6%	458	13.6%
Texas .....	12,944	4.9%	1,953	6.0%
<b>Western-Pacific—Total</b> .....	<b>29,598</b>	<b>3.3%</b>	<b>4,636</b>	<b>4.1%</b>
Arizona .....	4,111	9.0%	879	11.7%
California .....	23,279	3.6%	3,314	4.1%
Hawaii .....	312	29.8%	140	42.2%
Nevada .....	1,838	13.1%	268	19.7%

\* Standard error greater than 100%.

NOTE: Column totals may differ from printed totals due to estimation procedures.

## **IX. AIRCRAFT ACCIDENTS**

The data presented in this chapter were obtained from the National Transportation Safety Board.

The Safety Board's statistics categorize aviation accidents according to the Federal Air Regulations under which the accident flights were made. The groupings are:

- Large airlines in scheduled and nonscheduled service under Part 121 of the regulations
- Commuter carriers in scheduled service under Part 135
- "On-demand" air taxis in unscheduled operations under Part 135, and
- General aviation—all other civil flying.

See Glossary under "Aircraft Accident": for NTSB definitions for the following terms: "Fatal Injury", "Operator", "Serious Injury", and "Substantial Damage".

More detailed accident data may be obtained from the National Transportation Safety Board.

**TABLE 9.1**  
**AIR CARRIER AND GENERAL AVIATION**  
**AIRCRAFT ACCIDENTS AND FATALITIES**  
(Preliminary Data)  
**1993**

Air Carrier and General Aviation Operations	Number of Accidents		Number of Fatalities
	Total	Fatal	
Air Carriers			
Air Carriers Operating Under 14 CFR 121 <sup>1</sup>			
Scheduled .....	23	1	1
Nonscheduled .....	0	0	0
Air Carriers Operating under 14 CFR 135			
Scheduled <sup>2</sup> .....	16	4	24
Nonscheduled <sup>3</sup> .....	71	19	42
General Aviation <sup>4</sup> .....	2,022	385	715

<sup>1</sup> Airlines.

<sup>2</sup> Commuters.

<sup>3</sup> On-Demand Taxis.

<sup>4</sup> Includes accidents involving aircraft flown under rules other than CFR 121 and CFR 135.

Source: National Transportation Safety Board.

**TABLE 9.2**  
**AIRLINES**  
(Air Carriers Operating under 14 CFR 121)  
**ACCIDENTS, FATALITIES, AND RATES**  
(Preliminary Data)  
**1993**

	Scheduled	Non-scheduled
Accidents		
Total .....	23	0
Fatal .....	1	0
Fatalities .....	1	0
Aircraft Hours Flown (000) <sup>1</sup> .....	11,900	624
Departures (000) <sup>1</sup> .....	7,732	312
Accident Rate Per 100,000 Hours Flown		
Total .....	0.19	0.00
Fatal .....	0.01	0.00
Accident Rate Per 100,000 Departures		
Total .....	0.30	0.00
Fatal .....	0.01	0.00

<sup>1</sup> Exposure data estimate source: Research and Special Programs Administration and FAA.

Source: National Transportation Safety Board.

**TABLE 9.3**  
**AIRLINES**  
(Air Carriers Operating under 14 CFR 121)  
**FATAL ACCIDENTS, FATALITIES**  
(Preliminary Data)  
**1993**

Location	Operator	Date	Service	Aircraft Type	Fatalities				Total On-board	Reported Type of Accident
					Total	Pas-senger	Crew	Others		
<b>SCHEDULED SERVICE</b> Chicago, IL .....	Simmons Airlines dba: American Eagle	4/4	Psgr	ATR 42-300	1	0	0	1	48	Ground crewmember struck by propeller.
<b>NONSCHEDULED SERVICE</b>			None							

Source: National Transportation Safety Board.

**TABLE 9.4**  
**AIRLINES: SCHEDULED AND NONSCHEDULED SERVICE <sup>1</sup>**  
**ACCIDENTS, FATALITIES AND RATES**  
**(U.S. Air Carriers Operating Under 14 CFR 121)**  
**1984-1993**

	1984	1985	1986	1987	1988	1989	1990	1991	1992 <sup>4</sup>	1993 <sup>5</sup>
Accidents										
Total .....	17	22	24	36	29	28	24	26	18	23
Fatal .....	1	7	3	5	3	11	6	4	4	1
Total Fatalities .....	4	526	8	232	285	278	39	62 <sup>6</sup>	33	1
Aircraft Hours Flown (000) <sup>2</sup> .....	8,165	8,710	9,976	10,645	11,140	11,274	12,150	11,900	12,496	12,524
Aircraft Miles Flown (000,000) <sup>2</sup> .....	3,428	3,631	4,018	4,361	4,503	4,605	4,970	4,851	5,088	5,147
Departures (000) <sup>2</sup> .....	5,899	6,307	7,202	7,601	7,716	7,645	8,225	7,986	8,081	8,044
Accident Rate Per 100,000 Hours Flown										
Total .....	0.21	0.25	0.23	0.33	0.25	0.25	0.20	0.22	0.14	0.18
Fatal .....	0.01	0.08	0.02	0.04	0.02	0.10	0.05	0.03	0.03	0.01
Accident Rate Per Million Miles Flown										
Total .....	0.01	0.01	0.01	0.01	0.01	0.01	0.00 <sup>3</sup>	0.01	0.00 <sup>3</sup>	0.00 <sup>3</sup>
Fatal .....	0.00 <sup>3</sup>	0.00 <sup>3</sup>	0.00 <sup>3</sup>	0.00 <sup>3</sup>	0.00 <sup>3</sup>	0.00 <sup>3</sup>	0.00 <sup>3</sup>	0.00 <sup>3</sup>	0.00 <sup>3</sup>	0.00 <sup>3</sup>
Accident Rate Per 100,000 Departures										
Total .....	0.29	0.35	0.32	0.46	0.36	0.37	0.29	0.33	0.22	0.29
Fatal .....	0.02	0.11	0.03	0.05	0.03	0.14	0.07	0.05	0.05	0.01

<sup>1</sup> Includes accidents involving deregulated all-cargo air carriers and commercial operators of large aircraft when those accidents occurred during scheduled 14 CFR 121 operations.

<sup>2</sup> Exposure data estimate source: Research and Special Programs Administration.

<sup>3</sup> Rounds to 0.00.

<sup>4</sup> Revised.

<sup>5</sup> Preliminary.

<sup>6</sup> Includes 12 persons killed on a Skywest commuter aircraft and 22 persons killed on an USAir airliner when the two aircraft collided.

Source: National Transportation Safety Board.

NOTE: The following suicide/sabotage cases are included in Accidents and Fatalities but not in Accident Rates:

Date	Operator	Total	Aboard
04/02/86	Trans World	4	4
12/07/87	Pacific Southwest	43	43
12/21/88	Pan American	270	259

**TABLE 9.5**  
**AIRLINES: SCHEDULED SERVICE<sup>1</sup>**  
**ACCIDENTS, FATALITIES AND RATES**  
**(U.S. Air Carriers Operating Under 14 CFR 121)**  
**1984-1993**

	1984	1985	1986	1987	1988	1989	1990	1991	1992 <sup>4</sup>	1993 <sup>5</sup>
Accidents										
Total .....	13	17	21	32	28	24	22	25	16	23
Fatal .....	1	4	2	4	3	8	6	4	4	1
Total Fatalities .....	4	197	5	231	285	131	39	62 <sup>6</sup>	33	1
Aircraft Hours Flown (000) <sup>2</sup> .....	7,736	8,265	9,495	10,115	10,521	10,598	11,525	11,254	11,866	11,900
Aircraft Miles Flown (000,000) <sup>2</sup> .....	3,259	3,453	3,829	4,126	4,261	4,338	4,712	4,584	4,816	4,885
Departures (000) <sup>2</sup> .....	5,666	6,069	6,928	7,293	7,348	7,269	7,931	7,675	7,720	7,732
Accident Rate Per 100,000 Hours Flown										
Total .....	0.17	0.21	0.21	0.31	0.26	0.23	0.19	0.22	0.14	0.19
Fatal .....	0.01	0.05	0.01	0.03	0.02	0.08	0.05	0.04	0.03	0.01
Accident Rate Per Million Miles Flown										
Total .....	0.00 <sup>3</sup>	0.00 <sup>3</sup>	0.01	0.01	0.01	0.01	0.00 <sup>3</sup>	0.01	0.00 <sup>3</sup>	0.00 <sup>3</sup>
Fatal .....	0.00 <sup>3</sup>	0.00 <sup>3</sup>	0.00 <sup>3</sup>	0.00 <sup>3</sup>	0.00 <sup>3</sup>	0.00 <sup>3</sup>	0.00 <sup>3</sup>	0.00 <sup>3</sup>	0.00 <sup>3</sup>	0.00 <sup>3</sup>
Accident Rate Per 100,000 Departures										
Total .....	0.23	0.28	0.29	0.43	0.37	0.33	0.28	0.33	0.21	0.30
Fatal .....	0.02	0.07	0.01	0.04	0.03	0.11	0.08	0.05	0.05	0.01

<sup>1</sup> Includes accidents involving deregulated all-cargo air carriers and commercial operators of large aircraft when those accidents occurred during scheduled 14 CFR 121 operations.

<sup>2</sup> Exposure data estimate source: Research and Special Programs Administration.

<sup>3</sup> Rounds to 0.00.

<sup>4</sup> Revised.

<sup>5</sup> Preliminary.

<sup>6</sup> Includes 12 persons killed on a Skywest commuter aircraft and 22 persons killed on an USAir airliner when the two aircraft collided.

Source: National Transportation Safety Board.

NOTE: The following suicide/sabotage cases are included in Accidents and Fatalities but not in Accident Rates:

Date	Operator	Total	Aboard
04/02/86	Trans World	4	4
12/07/87	Pacific Southwest	43	43
12/21/88	Pan American	270	259

**TABLE 9.6**  
**AIRLINES: NONSCHEDULED SERVICE <sup>1</sup>**  
**ACCIDENTS, FATALITIES AND RATES**  
**(U.S. Air Carriers Operating Under 14 CFR 121)**  
**1984-1993**

	1984	1985	1986	1987	1988	1989	1990	1991	1992 <sup>4</sup>	1993 <sup>5</sup>
Accidents										
Total .....	4	5	3	4	1	4	2	1	2	0
Fatal .....	0	3	1	1	0	3	0	0	0	0
Total Fatalities .....	0	329	3	1	0	147	0	0	0	0
Aircraft Hours Flown (000)1 .....	429	445	481	530	619	677	625	646	629	624
Aircraft Miles Flown (000,000)1 .....	169	178	188	235	243	267	258	267	272	262
Departures (000)1 .....	233	238	274	308	368	376	294	310	361	312
Accident Rate Per 100,000 Hours Flown										
Total .....	0.93	1.13	0.62	0.76	0.16	0.59	0.32	0.16	0.32	0.00
Fatal .....	0.00	0.68	0.21	0.19	0.00	0.44	0.00	0.00	0.00	0.00
Accident Rate Per Million Miles Flown										
Total .....	0.02	0.03	0.02	0.02	0.00 <sup>3</sup>	0.02	0.01	0.00 <sup>3</sup>	0.01	0.00
Fatal .....	0.00	0.02	0.01	0.00 <sup>3</sup>	0.00	0.01	0.00	0.00	0.00	0.00
Accident Rate Per 100,000 Departures										
Total .....	1.72	2.10	1.10	1.30	0.27	1.06	0.68	0.32	0.55	0.00
Fatal .....	0.00	1.26	0.37	0.32	0.00	0.80	0.00	0.00	0.00	0.00

<sup>1</sup> Includes accidents involving deregulated all-cargo air carriers and commercial operators of large aircraft when those accidents occurred during scheduled 14 CFR 121 operations.

<sup>2</sup> Exposure data estimate source: Research and Special Programs Administration.

<sup>3</sup> Rounds to 0.00.

<sup>4</sup> Revised.

<sup>5</sup> Preliminary.

Source: National Transportation Safety Board.



**TABLE 9.7**  
**COMMUTER AIR CARRIERS**  
(Air Carriers Operating under 14 CFR 135)  
**FATAL ACCIDENTS, FATALITIES**  
(Preliminary Data)  
**1993**

Location	Operation	Date	Service	Aircraft Type	Fatalities				Total On-board	Reported Type of Accident
					Total	Pas-senger	Crew	Others		
Total .....					24	19	4	1	38	
Nome, AK .....	Ryan Air Service	03-Apr	Psgr	Cessna 207	2	1	1	0	2	Crashed into flat terrain shortly after take-off.
Las Vegas, NV .....	Air Nevada Airlines	12-Jul	Psgr	Cessna 402-C	3	2	1	0	3	Lost control and crashed while returning to airport for a precautionary landing.
Newark, NJ .....	Northeast Express Airlines, dba: Northwest Airlink	05-Nov	Psgr	Fairchild SA 227-AC	1	0	0	1	15	Ground crewmember struck by propeller.
Hibbing, MI .....	Express Airlines II, dba: Northwest Airlink	01-Dec	Psgr	BAE 3101	18	16	2	0	18	Crashed 3 miles short of airport during approach.

Source: National Transportation Safety Board.

**TABLE 9.8**  
**COMMUTER AIR CARRIERS**  
(U.S. Air Carriers Operating under 14 CFR 135)<sup>1</sup>  
**AIRCRAFT ACCIDENTS, FATALITIES, AND RATES**  
**1984-1993**

	1984	1985	1986	1987	1988	1989	1990	1991	1982 <sup>4</sup>	1983 <sup>5</sup>
Accidents										
Total .....	22	21	15	32	19	18	15	22	23	16
Fatal .....	7	7	2	10	2	5	3	8	7	4
Fatalities .....	48	37	4	59	21	31	6	99 <sup>6</sup>	21	24
Aircraft Hours Flown (000) <sup>2</sup> .....	1,746	1,737	1,725	1,946	2,093	2,241	2,337	2,171	2,181	2,369
Aircraft Miles Flown (000,000) <sup>2</sup> .....	291	301	307	351	380	394	450	381	442	489
Departures (000) <sup>2</sup> .....	2,677	2,561	2,799	2,810	2,909	2,819	3,160	2,648	2,911	3,144
Accident Rate Per 100,000 Hours Flown <sup>3</sup>										
Total .....	1.26	1.21	0.87	1.64	0.91	0.80	0.64	1.01	1.01	0.68
Fatal .....	0.40	0.40	0.12	0.51	0.10	0.22	0.13	0.37	0.32	0.17
Accident Rate Per Million Miles Flown <sup>3</sup>										
Total .....	0.08	0.07	0.05	0.09	0.05	0.05	0.03	0.06	0.05	0.03
Fatal .....	0.02	0.02	0.01	0.03	0.01	0.01	0.01	0.02	0.02	0.01
Accident Rate Per 100,000 Departures <sup>3</sup>										
Total .....	0.82	0.82	0.54	1.14	0.65	0.64	0.48	0.83	0.76	0.51
Fatal .....	0.26	0.27	0.07	0.36	0.07	0.18	0.10	0.30	0.24	0.13

<sup>1</sup> Includes accidents involving deregulated all-cargo air carriers and commercial operators of large aircraft when those accidents occurred during scheduled 14 CFR 121 operations.

<sup>2</sup> Exposure data estimate source: Research and Special Programs Administration.

<sup>3</sup> Rates are based on all accidents including some involving operators not reporting to RSPA.

<sup>4</sup> Revised.

<sup>5</sup> Preliminary.

<sup>6</sup> Includes 12 persons killed on a Skywest commuter aircraft and 22 persons killed on an USAir airliner when the two aircraft collided.

Source: National Transportation Safety Board.

**TABLE 9.9**  
**ON-DEMAND AIR TAXIS**  
 (U.S. Air Carriers Operating under 14 CFR 135)  
**AIRCRAFT ACCIDENTS, FATALITIES, AND RATES**  
**1984-1993**

Year	Number Of Accidents		Total Fatalities	Aircraft Hours Flown (000) <sup>1</sup>	Accident Rate Per 100,000 Aircraft Hours	
	Total	Fatal			Total Accidents	Fatal Accidents
1984 .....	146	23	52	2,843	5.14	0.81
1985 .....	154	35	76	2,570	5.99	1.36
1986 .....	117	31	65	2,690	4.35	1.15
1987 .....	97	30	65	2,657	3.65	1.13
1988 .....	101	28	59	2,632	3.84	1.06
1989 .....	111	25	83	3,020	3.68	0.83
1990 .....	106	28	50	2,249	4.71	1.24
1991 .....	87	27	70	2,241	3.88	1.20
1992 <sup>3</sup> .....	76	24	70	2,009	3.78	1.19
1993 <sup>3</sup> .....	71	19	42	2,100	3.38	0.90

<sup>1</sup> Exposure data estimate from FAA.

<sup>2</sup> Revised.

<sup>3</sup> Preliminary.

Source: National Transportation Safety Board.

**TABLE 9.10**  
**U.S. GENERAL AVIATION FLYING**  
 (All Operations other than those Operating under 14 CFR 121 or 14 CFR 135)  
**AIRCRAFT ACCIDENTS, FATALITIES, AND RATES**  
**1984-1993**

Year	Number Of Accidents		Total Fatalities	Aircraft Hours Flown (000) <sup>2</sup>	Accident Rate Per 100,000 Aircraft Hours <sup>2</sup>	
	Total	Fatal			Total Accidents	Fatal Accidents
1984 .....	3,016	545	1,042	29,099	10.35	1.87
1985 .....	2,738	498	955	28,322	9.66	1.75
1986 .....	2,582	474	967	27,073	9.54	1.75
1987 .....	2,494	447	838	26,972	9.24	1.65
1988 .....	2,386	460	800	27,446	8.69	1.68
1989 .....	2,230	431	768	27,920	7.97	1.53
1990 .....	2,214	442	766	28,510	7.76	1.55
1991 .....	2,170	431	781	27,226	7.96	1.58
1992 <sup>3</sup> .....	2,074	447	862	23,792	8.71	1.87
1993 <sup>4</sup> .....	2,022	385	715	23,000	8.79	1.67

<sup>1</sup> Suicide/sabotage accidents are excluded from rates.

<sup>2</sup> Exposure data estimate from FAA.

<sup>3</sup> Revised.

<sup>4</sup> Preliminary.

Source: National Transportation Safety Board.

## **X. AERONAUTICAL PRODUCTION AND IMPORTS/EXPORTS**

The aircraft production information presented in this chapter was obtained from the Bureau of Census: Complete Aircraft Plant Report (Form M37G). The shipment data shows the number of civil aircraft shipped by the United States manufacturers and includes both aircraft shipped within the United States and those exported.

Import and export data were obtained from the Aerospace Industries Association of America, Inc. and were based on Bureau of the Census data from special monthly compilation of Annual Reports 246 and 446, respectively.

**TABLE 10.1**  
**TOTAL CIVIL AIRCRAFT PRODUCTION, WEIGHT, AND COST**  
**CALENDAR YEARS 1984-1993**

Calendar Year	Number of Aircraft	Value Complete Aircraft (\$000)	Average Complete Aircraft Cost			
			Total (\$000)	Fixed Wing (\$000)	Rotor Craft (\$000)	Other (\$000)
1984 .....	2,635	7,911,543	3,002,483	NA	NA	NA
1985 .....	2,457	10,939,831	4,452,516	NA	NA	NA
1986 .....	2,888	12,517,992	4,334,485	NA	NA	NA
1987 .....	2,319	12,491,743	5,386,394	NA	NA	NA
1988 .....	2,681	16,019,855	5,975,328	NA	NA	NA
1989 .....	3,129	17,467,335	5,582,402	NA	NA	NA
1990 .....	2,785	24,864,289	8,927,931	NA	NA	NA
1991 .....	2,867	29,780,358	10,387,289	NA	NA	NA
1992 .....	2,517	31,733,026	12,607,480	20,583	465	20
1993 .....	3,189	26,843,066	8,417,393	18,865	417	12

NOTE: Other includes balloons, dirigibles, airships, gliders, sailplanes, and aircraft sold in kits (except hand gliders).

Source: U.S. Department of Commerce, Bureau of the Census, Industry Division.

**TABLE 10.2**  
**NUMBER OF SHIPMENTS OF COMPLETE CIVIL AIRCRAFT**  
**1984-1993**

Item	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984
<b>Total .....</b>	<b>3,189</b>	<b>2,417</b>	<b>2,867</b>	<b>2,785</b>	<b>3,129</b>	<b>2,681</b>	<b>2,319</b>	<b>2,888</b>	<b>2,842</b>	<b>3,028</b>
Fixed Wing .....	1,416	1,539	1,598	1,759	2,014	1,734	1,516	1,858	2,457	2,635
Rotorcraft .....	269	308	574	582	603	517	360	493	385	393
Other .....	1,504	570	695	444	512	430	443	537	NA	NA

NOTE: Other includes balloons, dirigibles, airships, gliders, sailplanes, and aircraft sold in kits (except hang gliders).

**TABLE 10.3**  
**NUMBER OF U.S. IMPORTS OF CIVIL AEROSPACE PRODUCTS**  
**1984-1993**

Item	1988	1987	1986	1985	1984
Aircraft Used or Rebuilt, Civil .....	194	115	141	246	223
Helicopters, Civil .....	114	98	87	60	61
Aircraft, Single-Engine, Civil .....	40	41	71	46	21
Aircraft, Multiengine Under 4,400 lbs., Civil .....	3	1	18	8	33
Aircraft, Multiengine, 4,400 to 10,000 lbs., Civil .....	74	101	58	46	58
Aircraft, Multiengine, 10,000 to 33,000 lbs., Civil .....	152	155	150	103	95
Aircraft, Multiengine, Over 33,000 lbs., Civil .....	18	22	36	29	12
Balloons, and Airships, Civil .....	0	0	0	0	0
Gliders, Civil .....	111	117	181	628	448

NOTE: Categories were changed to reflect Commerce Department's change to the Harmonized Trade Schedule. Historical data are not available in these new categories.

Item	1993	1992	1991	1990	1989
Complete Aircraft .....	1,330	946	955	1,262	674
Transports .....	54	64	44	30	36
Passenger .....	54	64	44	30	33
Cargo .....	—	—	—	—	—
Other Combinations .....	—	—	—	—	3
General Aviation .....	212	216	254	743	213
Single Engine .....	96	67	72	522	59
Multi Engine .....	116	149	182	221	154
Small .....	—	7	1	5	1
Medium .....	6	18	41	53	27
Large .....	110	124	140	163	126
Turbojet/Turbofan .....	66	52	45	63	39
Others .....	44	72	95	100	87
Helicopters .....	159	148	244	167	124
Small .....	5	3	4	21	9
Large .....	154	145	240	146	115
Others .....	905	521	413	322	301
Used/Rebuilt .....	258	176	246	130	210
New .....	647	345	167	192	91

Source: Aerospace Industries Association, Inc. based on Bureau of Census data from special monthly compilation of Annual Report, FT-410.

**TABLE 10.4**  
**NUMBER OF U.S. EXPORTS OF CIVIL AEROSPACE PRODUCTS**  
**1984-1993**

Item	1988	1987	1986	1985	1984
Aircraft Used or Rebuilt, Civil .....	1,644	969	494	277	304
Aircraft Helicopter, New, Under 2200 lbs., Civil .....	161	129	104	68	155
Aircraft, Helicopter, New, Over 2200 lbs., Civil .....	119	152	106	69	78
Aircraft, Single-Engine New Civil .....	459	307	220	334	271
Aircraft, Multiengine, New, Under 4400 lbs., Civil .....	51	51	63	66	53
Aircraft, Multiengine, New, Over 4400 lbs., Under 10,000 lbs., Civil .....	109	127	93	65	83
Aircraft, Multiengine, New, Over 10,000 lbs., Under 33,000 lbs., Civil .....	24	24	38	19	18
Aircraft, Passenger, New, Over 33,000 lbs., Civil .....	205	160	149	140	77
Aircraft, Cargo, New, Over 33,000 lbs., Civil .....	8	4	2	6	3
Aircraft Other, New, Over 33,000 lbs., Including Combinations, Civil .....	4	6	8	6	3
Aircraft Other, New, Including Balloons, Gliders & Kites, Civil .....	0	0	0	0	0

NOTE: Categories were changed to reflect Commerce Department's change to the Harmonized Trade Schedule. Historical data are not available in these new categories.

Item	1993	1992	1991	1990	1989
Complete Aircraft .....	1,985	2,374	4,204	4,814	6,452
Transports .....	278	387	385	297	260
Passenger .....	272	376	371	294	256
Cargo .....	2	1	5	3	1
Other Combinations .....	4	10	9	0	3
General Aviation .....	333	358	534	1,144	1,597
Single Engine .....	97	186	345	896	1,406
Multi Engine .....	236	172	189	248	191
Small .....	104	19	22	33	39
Medium .....	74	93	98	136	104
Large .....	58	60	69	79	48
Turbojet/Turbofan .....	57	59	58	63	35
Others .....	1	1	11	16	13
Helicopters .....	175	212	318	349	294
Small .....	143	175	246	266	186
Large .....	32	37	72	83	108
Others .....	1,199	1,417	2,967	3,024	4,301
Used/Rebuilt .....	747	1,031	1,834	1,911	1,700
New .....	452	386	1,133	1,113	2,601

Source: Aerospace Industries Association, Inc. based on Bureau of Census data from special monthly compilation of Annual Report, FT-410.

## GLOSSARY

**Active Aircraft**—All legally registered civil aircraft which flew one or more hours.

**Aerial Application**—See Primary Use.

**Aerial Observation**—See Primary Use.

**Air Carriers**—The commercial system of air transportation consisting of the certificated air carriers, air taxis (including commuters), supplemental air carriers, commercial operators of large aircraft, and air travel clubs.

**Certificated air carrier**—An air carrier holding a Certificate of Public Convenience and Necessity issued by DOT to conduct scheduled services interstate. Nonscheduled or charter operations may also be conducted by these carriers. These carriers operate large aircraft (30 seats or more or a maximum payload capacity of 7,500 pounds or more) in accordance with FAR Part 121.

**Air taxi**—A classification of air carriers which transports in accordance with FAR part 135 persons, property, and mail using small aircraft (under 30 seats or a maximum payload capacity of less than 7,500 pounds).

**Commuter air carrier**—an air taxi operator which performs at least five round trips per week between two or more points and publishes flight schedules which specify the times, days of the week, and points between which such flights are performed.

**Supplemental air carrier (Charter)**—An air carrier which holds Certificates of Public Convenience and Necessity issued by the DOT, authorizing performance of passenger and cargo interstate charter services supplementing the scheduled service of the certificated air carriers. The authority of supplemental air carriers to engage in military charters is of an indefinite period. In addition, they can perform on an emergency basis, as may be authorized by the DOT, scheduled operations including the transportation of individually ticketed passengers and individually waybilled cargo.

**Commercial operator**—a person who for compensation or hire engages in the intrastate carriage of aircraft in air commerce of persons or property other than as an air carrier or foreign air carrier.

**Commercial operator of large aircraft**—commercial operator operating aircraft with 30 seats or more or a maximum payload capacity of 7,500 pounds or more.

**Aircraft Accident**—As defined by the National Transportation Safety Board, it is "an occurrence associated with the operation of an aircraft which takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, and in which any person suffers death or serious injury as a result of being in or upon the aircraft or by direct contact with the aircraft or anything attached thereto, or in which the aircraft receives substantial damage."

Fatal Injury means any injury which results in death within 7 days of the accident.

Operator means any person who causes or authorizes the operation of an aircraft, such as the owner, leasee, or bailee of an aircraft.

Serious Injury means any injury which (1) requires hospitalization for more than 48 hours, commencing within 7 days from the date the injury was received; (2) results in a fracture of any bone (except simple fractures of fingers, toes, or nose); (3) involves lacerations which cause severe hemorrhages, nerve, muscle, or tendon damage; (4) involves injury to any internal organ; (5) involves second- or third-degree burns, or any burns affecting more than 5 percent of the body surface.

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Substantial damage:

Except as described below, substantial damage means damage or structural failure which adversely affects the structural strength, performance, or flight characteristics of the aircraft, and which would normally require major repair or replacement of the affected component.

Exceptions: engine failure, damage limited to an engine, bent fairings or cowlings, dented skin, small puncture holes in the skin or fabric, ground damage to rotor or propeller blades, damage to landing gear, wheels, tires, flaps, engine accessories, brakes or wingtips are not considered substantial for the purpose of this part.

**Aircraft Contact**—Aircraft with which the flight service stations (FSS) have established radio communications contact. One count is made for each enroute, landing, or departing aircraft contacted by an FSS regardless of the number of contacts made with an individual aircraft during the same flight. A flight contacting five FSS's would be counted as five aircraft contacted.

**Aircraft Handled**—See IFR Aircraft Handled.

**Aircraft Type**—A term used in this publication in grouping aircraft by basic configuration—fixed—wing, rotorcraft, glider, dirigible, and balloon.

**Airline Transport Pilot**—See Pilot.

**Airman**—A pilot, mechanic, or other licensed aviation technician.

**Airman Certificate**—A document issued by the Administrator of the Federal Aviation Administration certifying that the holder complies with the regulations governing the capacity in which the certificate authorizes the holder to act as an airman in connection with aircraft.

**Airport**—An area of land or water that is used or intended to be used for the landing and takeoff of aircraft, and includes its buildings and facilities, if any.

**Airport Advisory Service (AAS)**—A service provided by flight service stations at airports not served by a control tower. This service consists of providing information to landing and departing aircraft concerning wind direction and velocity, favored runway, altimeter setting, pertinent known traffic, pertinent known field conditions, airport taxi routes and traffic patterns, and authorized instrument approach procedures.

**Airport Operation**—an aircraft takeoff or landing. There are two types of operations—local and itinerant.

Local operations are performed by aircraft which:

- (a) Operate in the local traffic pattern or within sight of the airport.
- (b) Are known to be departing for, or arriving from, flight in local practice areas within a 20-mile radius of the airport.
- (c) Execute simulated instrument approaches or low passes at the airport.

Itinerant operations are all airport operations other than local operations.

**Airport Traffic**—Aircraft operating in the air or on an airport surface exclusive of loading ramps and parking areas.

**Airport Traffic Control Service**—Air traffic control service provided by an airport traffic control tower for aircraft operating on the movement area and in the vicinity of an airport.

**Airport Traffic Control Tower (ATCT)**—A central operations facility in the terminal air traffic control system, which consist of a tower cab structure, including an associated IFR room if radar equipped, and uses air/ground



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communications, radar, visual signaling, and other services to provide safe and expeditious movement of terminal air traffic.

**Airports Grants-in-Aid Program**—A grant of funds by the Secretary of Transportation under the Airport & Airway Improvement Act of 1982 to a sponsor for the accomplishment of one or more projects.

**Project**—Projects (or separate projects submitted together) for the accomplishment of airport development or airport planning, including the combined submission of all projects which are to be undertaken at an airport in a fiscal year.

**Sponsor**—Any private owner of a public-use air OR any public agency (either individually or jointly with other public agencies) that submit to the Secretary of Transportation, in accordance with the Airport & Airway Improvement Act of 1982, an application for financial assistance.

**Primary Airports**—A commercial service airport which is determined to have .01 percent or more of the total number of passengers enplaned annually at all commercial service airports.

**Commercial Airports**—(also known as commercial service airports)—A public airport which is determined to enplane annually 2,500 or more passengers and receive scheduled passenger service of aircraft.

**Reliever Airports**—An airport designated as having the function of relieving congestion at a commercial service airport and providing more general aviation access to the overall community.

**General Aviation Airports**—(also known as public airports)—Any airport which is used or to be used for public purposes, under the control of a public agency, the landing area of which is publicly owned.

**System Planning**—(also known as integrated airport system planning)—The initial, as well as continuing development for planning purposes of information and guidance to determine the extent, type, nature, location, and timing of airport development needed in a specific area to establish a viable balanced, and integrated system of public-use airports.

**Airports of Entry**—Aircraft may land at these airports without prior permission to land from U.S. Customs.

**Air Route Traffic Control Center (ARTCC)**—A facility established to provide air traffic control service to aircraft operating on IFR flight plans within controlled airspace, and principally during the enroute phase of flight.

**Air Taxi**—See Air Carrier and Primary Use.

**Air Traffic Control (ATC)**—A service operated by appropriate authority to promote the safe, orderly, and expeditious flow of air traffic.

**Air Traffic Control Facility**—A facility which provides air traffic control services located in the U.S., its possessions and territories, and in foreign countries especially established by international agreement.

**Air Traffic Hub**—Air traffic hubs are not airports; they are the cities or twin cities requiring aviation services. The hubs fall into four classes as determined by each community's percentage of the total enplaned passengers all services and all operations U. S. certificated air carriers in the 50 States, the District of Columbia, and other U.S. areas.

**Large air traffic hub**—a community enplaning 1.00 percent or more of the total enplaned passengers.

**Medium air traffic hub**—a community enplaning from 0.25 to 0.99 percent of the total enplaned passengers.

**Small air traffic hub**—a community enplaning from 0.05 to 0.24 percent of the total enplaned passengers.

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**Nonhub**—a community enplaning less than 0.05 percent of the total enplaned passengers.

**American Flag Carrier**—See U.S. Flag Carrier.

**Approach Control Facility**—A terminal area traffic control facility providing approach control service.

**Approach Control Service**—Air traffic control service provided by an approach control-facility for arriving and departing aircraft and, on occasion, tower enroute control service.

**Business Transportation**—See Primary Use.

**Carrier Group**—A grouping of certificated air carriers determined by annual operating revenues as shown below:

Carrier Group	Annual Operating Revenues
Majors .....	\$1,000,000,000+
Nationals .....	\$100,000,000 - \$1,000,000,000
Large regionals .....	\$10,000,000 - \$99,999,999
Medium regionals .....	0 - \$9,999,999 or that operate aircraft with 60 or less seats or maximum payload capacity of 18,000 lbs.

**Certificated Route Air Carrier**—See Air Carrier.

**Commercial Operator**—See Air Carrier.

**Commercial Pilot**—See Pilot.

**Commuter Air Carrier**—See Air Carrier.

**Defense Visual Flight Rules (DVFR)**—A flight within an Air Defense Identification Zone conducted under the visual flight rules in Federal Aviation Regulation, Part 99.

**Domestic Operations**—In general, operations within and between the 50 States, and the District of Columbia.

**Executive Transportation**—See Primary Use.

**Flight Plan**—Specified oral or written information about the intended flight of an aircraft that is filed with air traffic control.

**Flight Service Station (FSS)**—Air traffic Service facilities within the National Airspace System (NAS) which provide preflight pilot briefings and en route communications with VFR flights, assist lost IFR/VFR aircraft, assist aircraft having emergencies, relay Air Traffic Control clearances, originate, classify, and disseminate Notices to Airmen, broadcast aviation weather and NAS information, receive the close flight plans, monitor radio NAVAIDS, notify search and rescue units of missing VFR aircraft, and operate the national weather teletype-writer system. In addition, at selected locations, FSSs take weather observations, issue airport advisories, administer airmen written examinations, and advise Customs and Immigration of across-the-border flights.

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**Flight Services**—The sum of flight plans originated and pilot briefs, multiplied by two, plus the number of aircraft contacted. See tables 2.6 and 2.14.

**Foreign Flag Air Carrier**—An air carrier other than a U.S. flag air carrier engaged in international air transportation (see also U.S. Flag Carrier).

**Foreign Mail**—Mail transported outside the United States by U.S. flag carriers for a foreign government.

**General Aviation**—That portion of civil aviation which encompasses all facets of civil aviation except air carriers.

**Helipport**—An area of land, water, or any structure used or intended to be used for the landing and takeoff of helicopters.

**Hub**—See Air Traffic Hub.

**IFR Aircraft Handled**—The number of IFR departures multiplied by two plus the number of IFR overs. This definition assumes that the number of departures (acceptances, extensions, and originations of IFR flight plans) is equal to the number of landings (IFR flight plans closed).

**IFR Departure**—An IFR departure includes IFR flights originating in center's area, accepted by the center under SOLE EN ROUTE clearance procedures, and extended by the center.

**IFR Over**—An IFR flight that originates outside the ARTCC area and passes through the area without landing.

**Inactive Aircraft**—All legally registered civil aircraft which flew zero hours.

**Instructional Flying**—See Primary Use.

**Instrument Approach**—An approach to an airport, with intent to land, by an aircraft flying in accordance with an IFR flight plan, when the visibility is less than 3 miles and/or when the ceiling is at or below the minimum initial altitude.

**Instrument Flight Rules (IFR)**—Rules governing the procedures for conducting instrument flight. Also a term used by pilots and controllers to indicate type of flight plan.

**Instrument Landing System (ILS)**—A precision instrument approach system which normally consists of the following electronic and visual aids:

**Localizer**—Provides course guidance to the runway.

**Glide Slope**—Provides vertical guidance during approach.

**Marker Beacon**—Provides aural and/or visual identification of a specific position along an instrument approach landing.

**Instrument Operation**—An aircraft operation in accordance with an IFR flight plan or an operation where IFR separation between aircraft is provided by a terminal control facility or air route traffic control center.

**International Flight Service Station (IFSS)**—A central operations facility in the flight advisory system, staffed and equipped to control aeronautical point-to-point telecommunications, and air-ground telecommunications with pilots operating over international territory or waters, which provides flight plan following, weather information, search and rescue action, and other flight assistance operations.

**International Operations**—In general, operations outside the territory of the U.S., including operations between the U.S. and foreign countries, and the U.S. and its territories or possessions. Includes both the combination passenger/cargo carrier and the all-cargo carriers engaged in international and territorial operations.

**Itinerant Operation**—See Airport Operation.

## GLOSSARY

**Jet Route**—A route designed to serve aircraft operations from 18,000 feet to 45,000 feet.

**Landing Rights Airports**—Any aircraft may land at one of these airports after securing prior permission to land from U.S. Customs.

**Large Air Traffic Hub**—See Air Traffic Hub.

**Large Regional Carrier**—See Carrier Groups.

**Large Certificated Air Carrier**—Carrier holding a certificate issued under section 401 of the Federal Aviation Act of 1958 and operating aircraft designed to have a maximum passenger seating capacity of more than 60 seats or a maximum payload capacity of more than 18,000 pounds, or conducting international operations.

**Local Operation**—See Airport Operation.

**Major Carriers**—See Carrier Groups.

**Medium Air Traffic Hub**—See Air Traffic Hub.

**Medium Regional Carrier**—See Carrier Groups.

**Microwave Landing System (MLS)**—An instrument landing system operating in the microwave spectrum which provides lateral and vertical guidance to aircraft having compatible avionics equipment.

**National Carriers**—See Carrier Groups.

**Nonhub**—See Air Traffic Hub.

**Notice to Airmen**—A notice containing information concerning the establishment, condition or change in any component of, or hazard in the National Airspace System, the timely knowledge of which is essential to personnel concerned with flight operations.

**Other**—See Primary Use.

**Other Work Use**—See Primary Use.

**Over**—See IFR Over.

**Personal Flying**—See Primary Use.

**Pilot**—

**Student Pilot**—A student pilot may not operate an aircraft that is carrying a passenger or that is carrying property for compensation or hire.

**Private Pilot**—A private pilot may not act as a pilot-in-command of aircraft that is carrying passengers for compensation or hire nor act as pilot-in-command in an aircraft that is being operated for compensation or hire (e. g.; one that has been hired to do pipeline patrol but carries no passengers.)

**Commercial Pilot**—A commercial pilot may act as pilot-in-command of an aircraft carrying passengers for compensation or hire and act as pilot-in-command in an aircraft that is being operated for compensation or hire (e. g.; one that has been hired to do pipeline patrol but carries no passengers.)

**Airline Transport Pilot**—An airline transport pilot may act as a pilot-in-command of an aircraft engaged in air carrier service.

**Pilot Briefing**—Information furnished a pilot to assist in flight planning. Principal items are weather conditions, notices to airmen, routes, and preparation and handling of the flight plan.

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**Primary Use**—The use category in which an aircraft flew the most hours. The eleven use categories are defined below:

**Aerial Application**—Any use of an aircraft for work purposes which concerns the production of foods, fibers, and health control in which the aircraft is used in lieu of farm implements or ground vehicles for the particular task accomplished. This includes fire fighting operations, the distribution of chemicals or seeds in agriculture, reforestation, or insect control.

**Aerial Observation**—Any use of an aircraft for aerial mapping/photography, survey, patrol, fish spotting, search and rescue, hunting, highway traffic advisory, or sightseeing; not included under Part 135.

**Commuter Air Carrier**—An air taxi that performs at least five scheduled round trips per week between two or more points or carries mail.

**Demand Air Taxi**—Use of an aircraft operating under Federal Aviation Regulations, Part 135, passenger and cargo operations, including charter and excluding commuter air carrier.

**Business Transportation**—Use of an aircraft not for compensation or hire by individuals for the purposes of transportation required by business in which they are engaged.

**Executive/Corporate Transportation**—Any use of an aircraft by a corporation, company, or other organization for the purposes of transporting its employees and/or property not for compensation or hire, and employing professional pilots for the operation of the aircraft.

**Instructional Flying**—Any use of an aircraft for the purpose of formal instruction with the flying instructor aboard, or with the maneuvers on the particular flight(s) specified by the flight instructor; excludes proficiency flying.

**Personal Flying**—Any use of an aircraft for personal purposes not associated with a business or profession, and not for hire. This includes maintenance of pilot proficiency.

**Other Work Use**—Any aircraft used for construction work (not included under Part 135), helicopter, hoist, towing gliders, or parachuting.

**Other**—Any other use of an aircraft not included above. (Example: experimentation, R&D; testing, demonstration, government).

**Private Pilot**—See Pilot.

**Private-Use Airport**—An airport which is not open for the use of the general public.

**Privately Owned Airport**—An airport which is owned by a private individual or corporation.

**Public-Use Airport**—An airport open to for public use without prior permission, and without restrictions within the physical capacities of available facilities. May or may not be publicly owned.

**Publicly Owned Airport**—An airport which is publicly owned and under control of a public agency.

**Small Air Traffic Hub**—See Air Traffic Hub.

**Small Certificated Air Carrier**—Carrier holding a certificate issued under section 401 of the Federal Aviation Act of 1958 and operating aircraft designed to have a maximum seating capacity of 60 or less seat or a maximum payload of 18,000 pounds or less.

**Stolport**—An airport specifically designed for STOL (Short Take-off and Landing) aircraft, separate from conventional airport facilities.

**Student Pilot**—See Pilot.

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**Supplementat Air Carrier**—See Air Carrier.

**Terminal Area**—A general term used to describe airspace in which approach control service or airport traffic control service is provided.

**Tower**—See Airport Traffic Control Tower.

**U.S. Flag Carrier or American Flag Carrier**—One of a class of air carriers holding a Certificate of Public Convenience and Necessity issued by the DOT, approved by the President, authorizing scheduled operations over specified routes between the United States (and/or its territories) and one or more foreign countries. (See also Foreign Flag Air Carrier.)

**VFR Flight**—Flight conducted in accordance with Visual Flight Rules.

**VOR**—Very high frequency omnidirectional radio range. Used as the basis for navigation in the national Airspace System.

**VORTAC**—A navigation aid providing azimuth and distance measuring equipment as one site.

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